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THE

HUNDRED GREATEST MEN PORTRAITS

OF THE

ONE HUNDRED GREATEST MEN OF HISTORY.

REPRODUCED FROM FINE AND RARE STEEL ENGRAVINGS.

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BOOK IV.

Philosophy.

METAPHYSICIANS—PSYCHOLOGISTS —MORALISTS.

INTRODUCTION.

PHILOSOPHY in its special meaning designates the highest and noblest knowledge which man can achieve, or to which man can aspire. In the order of time man first knows *that* something is, next *what* it is, next *whence and how* it begins to be, and last *for what end* it exists, or what is its place in the universe of being. The first of these steps gives *facts*, the next *classification* and *language*, the next explanation by causes and laws, and the last reconstruction by system and design. Science is simply common knowledge made exact and complete within a special and limited sphere; philosophy is the science of knowledge itself in its processes, its objects, its products. It is the Science of Sciences, and in the order of thought is fundamental and foremost—the *Scientia Scientiarum*.

The first beginnings of Philosophy were tentative and unsatisfying. Such were those of the early Greeks before the time of Socrates, who explained the universe either by some single element, as water or fire; or by the relations of number; or by imminent reason or thought. Socrates was the beginner of philosophy proper, inasmuch as he introduced a fixed method for its subsequent development. The sphere of his inquiries was man as contrasted with the material universe. He taught man to study himself that he might become better. But in so doing he must needs form and define his conceptions. In order to do this he must generalize from individual facts. It was in this way that Socrates laid the foundations of philosophy in the two processes of Definition and Induction. Both these processes assume permanent forces or agencies and relations and properties in the universe of matter and spirit. These

permanent entities became the themes of Plato's splendid discourses, under the title of Ideas. These were conceived by him as incapable of decay or dissolution, and in some sense as dwelling in or related to the Divine mind or soul of the universe. These glorified products of Plato's imagination have often been treated by Plato's admirers and followers, even down to the present time, as permanent and separable entities, or exalted into mythological or deified personages. Aristotle, with a more exact and analytic intellect, elaborated Socrates' doctrine of definition and induction to a careful analysis, and reduced the ideas of Plato to forms inseparable from matter. He also brought the doctrine of the Syllogism nearly into the form which has been retained in all subsequent schools. He furnished the beginnings of Psychology, and wrote profoundly of Life and Natural History, of Morals, of the State, of Poetry, of Aesthetics, of Physics and Metaphysics, and became, by force of his genius and humanity, "the teacher of all the centuries." After Aristotle, the Socratic school deployed into several sections, each of which retained some fragment of the truth taught by the masters, Stoic, Epicurean; Cynic, Academic; Neo-Platonic, and Sceptic; each exerting an important practical influence for good or for evil, but with no great advance or any further positive contributions to the thought of the world.

Christianity followed, professing nothing so little as to teach philosophy, but presenting facts and expressing truths which involved a definite theory of the material and moral universe, and of man as morally responsible to a personal Creator. It was not long before this philosophy began to be matured and expounded in Christian schools, generally in the spirit of Plato. Among the greatest of the early Christian philosophers Augustine stands pre-eminent. During the long night of the Middle Ages the necessity of culture for the clergy led to the establishment of schools at the great ecclesiastical centres, at which scanty outlines and extracts from Aristotle and Plato were the principal guides and authorities for the so-called philosophical exposition and defence of the doctrines of the Church. It was inevitable that the question should sooner or later arise in these schools as to the respective claims of reason and dogma. Even before the Renaissance and the Reformation, Philosophy began to assert its independence. After the capture of Constantinople brought the Greek authors, and the teachers who could read them, into Italy and Central Europe, and the discovery of America, the invention of printing, and the beginnings of modern physics and astronomy had inspired men with a new confidence in the scientific study of nature and of man, Philosophy emerged into a new life. Descartes and Spinoza, Leibnitz and Locke, Bacon and Newton, led the way in various fields of inquiry concerning the nature and trustworthiness of knowledge, concerning Faith and Science, concerning Matter and Spirit, and their reciprocal relations concerning the universe and God. Historically

viewed, Locke and Leibnitz are the most considerable figures among these leaders. Locke prepared the way for Berkeley, and Berkeley for Hume, whose extreme and subtle scepticism aroused by reaction the Scottish School of Common Sense, and the critical transcendentalism of Kant.

In France, Locke was introduced by Voltaire, and, misrepresented by Condillac, became unwittingly authority for the sensualistic atheism of Helvetius and Lamettrie. The beginnings of a better philosophy were furnished by Maine de Biran, trained in the school of Leibnitz, and by Royer Collard, a pupil of Dugald Stuart. In Germany, Kant subjected the elements and the processes of human knowledge to a critical examination more severe and comprehensive than it had ever before received in the light of the achievements of modern science and of modern life, the result of which was to vindicate the *à priori* authority of necessary truths, and at the same time to bring into question the trustworthiness of the intellect that assumed or questioned them. But against the destructive consequences of this cautious criticism, Kant essayed to provide a sufficient barrier in the authority of the Practical Reason and its Categorical Imperative of duty. But Kant raised more questions than he could answer. Hence his philosophy has wrought like leaven in every speculative school since his time, and many of the problems which he started are still as unsolved and unsettled as ever. The service which he rendered to modern philosophy in widening its sphere and in deepening its inquiries cannot be over-estimated. Fichte followed Kant, making a strictly logical application of a part of Kant's theory. Schelling followed Fichte, and endeavoured to avoid the consequences of both by a corrected theory of knowledge and its relation to the absolute in which nature and spirit were conceived as identical. Hegel astonished and captivated his generation by presenting the process and the objects of scientific knowledge in a logical system, whose abstractions he personified into living agencies, capable of self-development, even up to the idea or the reality of God. The critics of these four coryphaei of German philosophy have been numerous, and among them are men of great learning and distinguished ability. The so-called German philosophy has exerted a potent influence over the entire civilized world,—in France, Italy, England, and America, and has given form and character to the most important questions and controversies in all these countries.

Meanwhile, philosophical discussion has been taking a new direction from the side of physiology. The doctrine of the permanence of species, which had been accepted since the time of Plato, was effectually called in question by Charles Darwin, and on grounds of induction. To this was added the nebula hypothesis and the physiological doctrine of development taught by Schelling in his Metaphysics, and by the

naturalists of his school. This product was propounded by Herbert Spencer as the great metaphysical discovery of the age. It proposes to account for the history of the universe from its elemental condition, and explains the growth of all forms of being from the most simple to the most complex, as a necessary result of the processes of differentiation and integration. It essays also to explain by this single process every product of spiritual activity,—the sciences, the arts, the institutions, the laws, the manners, and the religions of the race.

By its devotees the doctrine is regarded as the sum and substance of the Final Philosophy. By those who reject it it is held to be the last Philosophical Romance. The confident zeal of its advocates is matched by the strong conviction of those who reject it. Its growth and existence cannot be overlooked in a sketch which includes the latest phase of Philosophy.

NOAH PORTER.



PYTHAGORAS.

SIXTH CENTURY B.C.

THE ORIGIN OF PHILOSOPHY.

THE sixth century B.C. was one of those rare periods in history when a host of sages seem to have entered the world together, to hold, as it were, a conference to enlighten ordinary mortals. The lives of Confucius, Buddha, Pythagoras, and many others belonging to this age, are enveloped in such a cloud of legendary fact and fable, that the query often arises as to their having existed at all. They may be, and in some cases appear to be, nothing more than the early beginnings of a school of philosophy, or semi-religious system, clustering round the name of some early teacher who is thus rescued from the dusty obscurity of bygone ages and made to father principles that have grown up slowly by the united efforts of many generations of thinkers. It seems a waste of time to collect and repeat apocryphal incidents relating to the lives and education of men

whose names merely represent systems of philosophy, and more to the point to describe succinctly what the systems are.

Pythagoras, it is said, was the founder of a school of philosophy, which had for its object religion, morality, politics, and science. Tradition says he travelled in the East for many years, collecting information in every department of knowledge. He is said to have become a priest in Memphis ; to have been initiated into all the sacred mysteries ; to have learned astronomy, astrology, and medicine, from the Chaldeans ; to have studied the doctrines of Zoroaster, and to have been acquainted with the religions of India ; and in his old age to have founded a school at Crotona in Magna Graecia.

The general tendency of his political teaching was to establish an aristocracy of letters, to make scientific knowledge the privilege of a small number of initiated, who were to be clothed with the robe of infallibility and govern the world. The scholar passed through successive grades, the listener became a teacher, then a mathematician, and finally, after a rigorous examination, was initiated into the mystic rites of the order.

The leading principles of Pythagorean philosophy are as follows : Number is the foundation of all knowledge ; God is the unity of this system of numbers—the one. God is also called the quadrinity (Tetractys), which contains within itself the four elements of space, matter, time, and destiny. God is also the universe ; created by the meeting of the finite and infinite. Unity, as understood by the Pythagoreans, is always dual, and contains opposite or antithetical elements, as good and bad, odd and even, perfect and imperfect, male and female, &c. The sun is the immovable centre of the universe, and the throne of God, round which all the other bodies revolve. Life is represented by a scale of figures, beginning with five, which stands for mere physical existence ; vegetable life by six ; animal life by seven ; human life by eight ; future life by nine, and divine life by ten. These symbolize the relative values of life, the scale of perfection.

“ The monad is the beginning of everything. From the monad proceeds an indefinite duad, which is subordinate to the monad as to its cause. That from the monad and the indefinite duad proceed numbers, and from numbers signs, and from these last lines of which plane figures consist. From plane figures are derived solid bodies ; from solid bodies sensible bodies, of which last there are four elements, fire, water, earth, and air. That the world, which is endued with life and intellect, and which is of a spherical figure, having the earth, which is also spherical and inhabited all over, in its centre, results from a combination of these elements, and derives its motion from them, and also that there are antipodes, and that what is below as respects us, is above in respect to them.

" He also says that the soul of man is divided into three parts : into intuition (*nous*), and reason (*phren*), and mind (*Thymos*) ; and that the first and last divisions are found also in other animals, but that the middle one, reason, is only found in man. That the chief abode of the soul is in those parts which are between the heart and the brain. And that that portion of it which is in the heart is the mind (*Thymos*) ; but that deliberation (*nous*), and reason (*phren*), reside in the brain. That the senses are drops from them ; that the reasoning sense is immortal ; but the others are mortal. That the soul is nourished by the blood ; that reasons are the winds of the soul. That the soul is invisible, and so are its reasons, since æther itself is also invisible. That the links of the soul are the veins, the arteries, and the nerves. But when it is vigorous, and is by itself in a quiescent state, its links are words and actions."

The soul has an existence separate from the body ; it is a number or unity in itself, and is destined to pass from one body to another, either of men or animals, according to its moral condition ; a soul for punishment passes into the body of one of the lower animals.

All numbers were not held in equal honour by the Pythagoreans ; they gave a special prominence to numbers one, three, seven, and ten, as well as to the figures in geometry founded on these numbers. They appear to have been more impressed by the harmony or symmetry involved in regular universal calculations than in any virtue found in numbers considered in the abstract, and carried this principle so far as to fix the distances between celestial bodies by the intervals between the notes of the harmonic scale or octave. The distance between the earth and the moon represented a whole tone, that between the moon and Mercury, and Mercury and Venus, was a semi-tone ; while between Saturn and the fixed stars there was an interval of a tone and a half. This harmony of the spheres, fanciful as it now seems, appealed strongly to the imagination of men. Even Kepler was induced to spend several years of his life seeking to verify the truth of this diapason of nature.

Pythagoras is said to have made the notable discoveries that the evening and morning star were the same, Venus, and that the earth revolved on its axis. He was the first to propound the "Copernican system of the universe."

Pythagorean philosophy is distinguished by its sentiment of order and harmony in all things ; it purports to be a scientific doctrine, resting on the intelligible relations of number and geometrical figures instead of the imaginary qualities and elements of the Ionian school. In this sense it was a step in advance of its competitor, and shows the earnest striving of the human mind to place natural phenomena upon the basis of exact science.

To Pythagoras is attributed the famous discovery of the relation

between the squares formed on the sides of right-angled triangles : several other mathematical theories, as the relations of rational and irrational numbers, and that between commensurable and incommensurable lines ; also the mathematical theory of the intervals between the notes of the musical scale.

The aristocratic tendencies of the Pythagorean school ended by gradually separating them from the people into a caste. Public opinion, which was essentially democratic, took alarm ; the school was attacked, it is said, and dispersed. A few disciples tried to continue the traditions and teachings, but the society as a whole was broken up, and little remained of Pythagoreanism. A book of their moral precepts, called the "golden verses," supposed to have been written by one of the disciples named Lysis, is the product of a late age, for the Pythagorean principles, more or less modified, still found numerous adherents as late as the second century of our era.

It is in the highest degree probable that there never was a Pythagoras, any more than a Homer. Homer really stands for Hellenic poetry ; Pythagoras for Hellenic philosophy. Their works are not the works of any one man, but express respectively the poetic and philosophic genius of the entire people. The nation is heroic in Hercules, law-abiding in Lyeurgus, rhapsodic in Homer, reflective in Pythagoras. Socrates, Plato, and Aristotle, the real persons, follow Pythagoras the ideal person, just as the real Æschylus, Sophocles, and Euripides follow the legendary Homer.



SOCRATES.

469-399 B.C.

MORAL PHILOSOPHY.

SOCRATES was born at Athens, or in *Aegina*, 469 b.c. (Ol. 77, 3). The great Persian war had come to an end a few years before; Sparta had renounced the headship of the Greek states in favour of Athens; and Pericles began to take part in public affairs the same year that Socrates was born. *Aeschylus* was still living. *Sophocles* won his first prize in 468, and *Euripides* began to exhibit in 455. The genius of *Phidias* and *Polygnotus* created and adorned the *Parthenon*; and Athens was made the most splendid of Greek cities. Orators and rhetoricians were attracted to her streets, and under the name of Sophists won an important place in history. The lifetime of Socrates thus includes the most brilliant period of Athenian history; he saw Athens at her zenith, and lived to see her fall.

His father Sophroniscus was a sculptor, his mother Phænarete a mid-wife. He learnt his father's trade, but early relinquished it, and devoted himself chiefly to the pursuit of knowledge. His first studies were of Physics; but finding no satisfaction in the current speculations and guesses in this field, he abandoned them and turned his attention exclusively to the study of man and morals. He did not begin his task as a teacher till towards the middle of his life. Before that time he had married, unhappily for himself, a Xanthippè, had led an active life among his fellow-citizens, and had honourably distinguished himself as a soldier at the battles of Potidæa, Delium, and Amphipolis. His constitution was singularly robust, and enabled him to surpass all his comrades in the endurance of toil, hunger, thirst, and hardships of war and weather. He went barefoot, and wore the same light clothing all the year round. His courage was not confined to the battle-field. He stood equally fearless and unmoved before a tyrant and in the face of a mob. Nothing could terrify him into doing what he deemed to be unjust. Once only he held office as a senator; and on the day when the presidency fell to him he resolutely opposed the unjust condemnation of the generals after the battle of Arginusæ.

The business of his life was teaching. Unlike other philosophers, he did not travel in pursuit of knowledge; he did not write; he had no school; he neither asked nor would receive pay for his instructions. In the spirit of a prophet or an apostle he girt himself to his work with an immovable conviction that he was divinely called to it. His manner was to go about the streets of Athens and talk with any one who came in his way. In outward aspect he presented a strange contrast to the professional and paid teachers of the day, the Sophists. These, wealthy and well-dressed, and accompanied by flocks of admiring disciples; he, poor and poorly clad, ugly to a ridiculous degree, and conversing with men of all classes on any mean subject familiar to them. He was likened to the popular figures of Silenus, which, outwardly ugly, held within them images of the gods. His method of teaching was first by a course of questions arising naturally one after the other to produce a conviction of ignorance or error (his peculiar *irony*); and then to lead step by step to some truer thought, not by assertion, but by helping the inquirer to detect what was present in his own mind (his *obstetrics of the mind*). Whatever happened to be the starting-point of conversation he would give it easily a moral turn.

He was especially fond of the young, and was successful to an extraordinary degree in winning their hearts. His aim was always to lead them in a path equally remote from a despairing scepticism like that of the Sophists, and from a grovelling superstition such as was spreading among the people. It is not easily to be apprehended what a rapture of admiration, reverence, and love was called forth by this Silenus shrining

a divinity. Strong men in middle age yielded to the witchery of his voice no less than the young, and bowed, often weeping, before this searcher of their hearts.

It was impossible that such a man should escape the usual lot of prophets and reformers. Socrates made enemies of many men whom he humiliated by his remorseless criticism, or by his public denunciation of their vices. Others disliked and dreaded him, on account of his seemingly ambiguous position towards the government and religion of his country. As early as 423 B.C., a formidable assault was made by Aristophanes in one of his masterpieces, "The Clouds." Aristophanes was a man of an earnest conservative temper in politics and religion, and in this play he held up Socrates to ridicule as the Arch-Sophist, and the ring-leader of Athenian freethinkers. The great teacher was presented on the stage and made not only ridiculous but odious as a corrupter of religion and morals. The blow told. The satirist gave definite form and utterance to hostile feeling already existing, and even suggested the course ultimately taken.

Socrates, however, was allowed for twenty years longer to pursue his course unmolested by the government. When the Peloponnesian war came to an end, and the Thirty Tyrants were masters of Athens, Critias, his old pupil, being one of them, he was subjected to some persecution; and on the re-establishment of the democratic government, a formal prosecution was instituted. The leader in the cause was one Anytus, a wealthy trader and an influential politician. With him were associated Meletus, a poet, and Lycon, an orator. The charges brought against Socrates, now an old man of seventy, were substantially the same as those put forward by Aristophanes in "The Clouds," that he did not believe in the gods which the State believed in, that he introduced new gods, and that he corrupted the youth by his teaching. Death was proposed as the penalty.

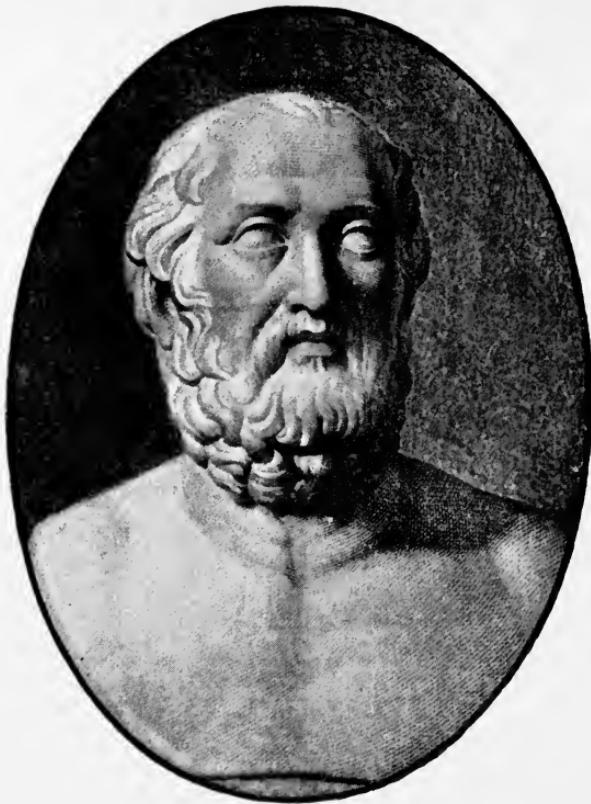
It is not clear what was the exact position of Socrates as to the religion of the State. That he believed in one supreme God, Creator and Ruler of the universe, is clear. That when he touched the tales of mythology he did so with delicate latent laughter and contempt is also clear. But no record is made of any distinct avowal, either of belief or disbelief, in the gods recognized by the State. The charge of introducing new divinities is believed to refer to his constant assertion of an inward voice which he recognized as a divine guide, which, however, never incited to action, but only warned and restrained. This inward divine voice was afterwards spoken of as the *daemon* of Socrates, and has been the theme of endless discussions.

Socrates declined to make use of a speech composed for him by the orator Lysias; and he avoided making in his own speech the customary appeals to the passions. He spoke with the confidence inspired by a good

conscience, and at the same time with a consciousness that his condemnation was a foregone conclusion. The spirit and substance of his defence is probably presented to us in the piece known as the "Apology of Socrates," attributed to Plato. Socrates was condemned, but only by a small majority of his judges. His speech, after sentence, in mitigation of the penalty, in which he claimed as his due from the State honour rather than punishment, was so offensive to the Court that it not only remained inexorable, but decreed death by a large majority. The fidelity and firmness of the martyr is always in the eyes of the persecutor pride, obstinacy, and wilfulness, and makes his offence the greater. Socrates was sent back to the prison to await the end. He was to drink the cup of hemlock. This would, in the usual course, have followed on the day after the sentence; but the sacred vessel which carried the annual Athenian offering to the temple of Apollo at Delos had just set sail, and during its absence no execution could take place. For thirty days the life of the teacher was prolonged, and during this time his friends had free access to him. Means of escape were offered by some of them, but he declined to avail himself of the offer. Death had no terrors for him; and he conversed with his friends to the last with unaffected serenity and the cheerfulness of faith and hope. On the last day Socrates set before his friends the grounds of his belief in the immortality of the soul.

The conversation is preserved for us, with other details of the closing scene in the dialogue of Plato named after Phædon, the beloved disciple of the master. The sublime pathetic story has moved readers to tears generation after generation. The wonder and beauty of it will shine through the poorest version; and the mysteries of life and death catch some gleams from its glory.

Powerful as was the personal influence of Socrates in his own day, this sinks into insignificance when compared with the vast results of his teaching in after ages. Through his greatest disciple, Plato, his spirit became identical with the spirit of philosophy; and the great schools which sprang up after his death were the offspring of his teaching.



PLATO.

429-348. B.C.

SYNTHETIC PHILOSOPHY.

IF it were required to select and name ten men who, by virtue of unique intellectual power and abiding influence on the human race, are entitled to reverent recognition as our greatest men, Plato must assuredly be one of them. A star of the first magnitude in the firmament of mind, appearing above our horizon more than two thousand years ago, he still shines with undecaying brightness, and still as at the first kindles and sustains the higher, truer life of men—the life of thought, of faith and love. True, his disciples, direct recipients of his radiant truth, are inevitably in every age a very small band, selectest spirits of the world. But through these his influence perennially streams upon the world, and thus the large courses of human thought are to a great extent determined. With a pardonable, even justifiable, audacity, Emerson asserts the pre-

eminence of this man in the phrase—"Plato is philosophy, and philosophy Plato." The saying is justified on the large scale of history. Philosophy disappeared from the world with Proclus, the last Platonist of the famous Alexandrian School, about the close of the fifth century of our era. Philosophy reappeared about the middle of the fifteenth century, when the works of Plato were brought to Italy and expounded at Florence by learned Greeks from Constantinople. In the intervening ten centuries the seat of philosophy was usurped by the offspring of Catholic theology and Aristotelian logic, Scholasticism.

It is a very remarkable circumstance, and one which we may quite reasonably regret, that of the man Plato and of the details of his life we are almost wholly ignorant. His written works have come down to us in singular completeness, and surprisingly free from corruption in the text; but in them he never speaks in his own person, nor is any biographical information about him to be gathered from them. He lived to a great age, in one of the most literary cities of the ancient world, was very widely known and held in highest honour, and for all that we have no information about him bearing the stamp of contemporary authority. No dates are assignable to any of his dialogues; so that it is impossible to find in them a clue to the growth of his mind. The philosopher still lives in his works, the man has vanished. As one has said, "There is no personal Plato." Many interesting particulars of his life are indeed given in some extant letters attributed to him; but the genuineness of these letters is at least doubtful. The difficulty of the biographer from dearth of facts is increased by the abundance of fictitious stories told by later writers. We give briefly the usually-accepted story of Plato's life.

He was born at Athens, or in Ægina, about 429 b.c. (Ol. 87, 4), the year in which Pericles died. He was the son of Ariston and Perictione, and was named Aristocles; "Plato" being a surname indicative probably of his broad brows. His life coincides with a most eventful period of Greek history; for not long before his birth the Peloponnesian war had begun, which, after confused struggles protracted through a quarter of a century, ended with the fall of Athens (403). The tyranny of the Thirty, the restoration of the democracy, and the death of Socrates followed within the next four years. In the later years of Plato's life the most memorable change in Greek history was the extension of the Macedonian power under Philip, who within a year of Plato's death became master of the whole of Greece.

Plato could boast of illustrious descent. His mother's ancestors were connected with the family of Solon, his father's were reputed to be connected with the mythical Codrus. He was a nephew of Critias, one of the Thirty, and also of Charmides, one of the Ten. Of robust constitution and thoroughly trained in gymnastics, he could take part in the contests at the Pythian and Isthmian games. His mind was no less

carefully cultivated ; he made quick progress in his studies, dipped into the current philosophies, and wrote poems, epic, dramatic, and lyrical. These he afterwards burnt. Some of his epigrams are however preserved. The most important fact in his life, its dominating force, which took the helm and steered him to the end, was his connection with Socrates. It began when he was about twenty years of age, and terminated only with the death of his master. It remains uncertain whether, as usually supposed, he spent the ten years, 409 to 399, in study alone, in the society of Socrates. It seems hardly possible that in such a crisis he should not have taken, like other young Athenians, his share in military service. He was deeply interested in public affairs, and was no stranger to political ambition. But his truthful and pure nature shrank from contact with the corrupt governments of which he had experience ; and he was ultimately driven by the prosecution of Socrates into studious seclusion. After attending his beloved master during his trial and last days, he quitted Athens, resolved to keep clear of politics and to give himself wholly to philosophy.

He retired first to Megara ; then visited Cyrene and Egypt ; and some years later Italy and Sicily. In these journeys he met with the Pythagorean philosophers, whose doctrines powerfully influenced his mind ; visited Ætna, made the acquaintance of Dion, and was introduced to the tyrant Dionysius the Elder. Plato is said to have offended him by his bold speaking, and to have been not only sent angrily away, but even sold into slavery. If so, he was soon ransomed, and reached Athens again about 387.

He now settled there, and began his chosen task as a teacher of philosophy. He had a small house and garden about a mile from the city on the road to Eleusis. It adjoined the "Academia," the precinct sacred to the hero Academus ; and here was founded, says Grote, "the earliest of those schools of philosophy which continued for centuries forward to guide and stimulate the speculative minds of Greece and Rome." Pupils were attracted from all cities and parts of Greece. The greatest among them was Aristotle. Demosthenes may have been there. The great geometrician and astronomer, Eudoxus, was one of them. Plato adopted in his teaching the method of Socrates ; and like Socrates he taught gratuitously, receiving presents however when offered by the rich. The quiet seclusion of his school presented a striking contrast to the publicity which Socrates sought.

The interesting and important question as to the formal social position respectively of the Sophists and of Socrates and Plato, and of their relation to each other, is still under discussion ; Mr. Grote having challenged the common view and argued powerfully in vindication of the Sophists.

After the death of Dionysius the Elder, Plato, at the instance of his friend

Dion, again went to Sicily with a view to assist the younger Dionysius in establishing a better government. The project failed, Dion was banished, and Plato returned home. A second visit likewise ended in failure. These relations with the tyrant of Sicily brought down severe censures on the philosopher; and his last years were saddened both by the disappointment of his high hopes and the reproaches of his enemies. Plato died about 348-7 B.C. (Ol. 108, 1). The school which he had founded and presided over for forty years was carried on in the same place till the siege of Athens by Sylla, 87 B.C., when it was removed within the city. Cicero visited the school and the academy.

Plato never married, had no child, took no part in political affairs or in social gaieties. He lived the life of thought, and his habitual seriousness became proverbial,—“as sad as Plato.”

He was the most Socratic of all the disciples of Socrates; and his reverence for his master is shown by the place assigned to him in his works. These are all in the form of dialogues, of which, with one exception, Socrates is the central figure, the speaker of all thought-out conclusions. Plato survived Socrates about fifty years, and all the dialogues were composed during this period. No *system* of philosophy is built up by Plato. Each dialogue is an independent work, and inconsistencies are to be found not only between separate dialogues, but even within the limits of a single one. Attempts have been made to classify these works, both logically and chronologically, but without success. In range of speculation, and in the harmonious union of the philosophic with the poetic spirit, the works of Plato stand alone. As with Socrates so with Plato, the aim is not so much to teach particular truths as to stimulate inquiry and impart a method. Idlers were warned away from the severe intellectual discipline of the Academy by the inscription over its entrance, “Let no one enter who is not a geometrician.” The severity of thought in Plato’s writings is, however, relieved by the charm of inimitable style, by consummate dramatic art, and by the play of fancy and imagination.

One of the most constant and most memorable of Plato’s doctrines is that of *Ideas* as essences, eternal archetypes, of which all merely outward ever changing objects are but copies or likenesses, and the innate notions of which in our minds are recollections awakened by means of perception of those copies. Plato was thus the first Realist in philosophy; and in his doctrine of Ideas is to be found the origin of the famous controversy of the Middle Ages between Realist and Nominalist.

We owe to him the threefold division of philosophy into Logie (Dialectics), Metaphysics, and Morals, the first sketch of the laws of thought, and the first attempt at the construction of a philosophical language. In his works we find also the first formal development of the spirituality of the soul, and the first attempt to demonstrate its immortality.

His moral conclusions are of the loftiest and most rigorous character, and are announced clearly, positively, and persistently.

In some cases his teaching is a surprising anticipation of a higher doctrine that was to come. So remarkable was this fact to early Christian thinkers that they readily accepted by way of explanation the story of his Eastern travels and communication with the Jews. The same fact led Coleridge to speak of him as "that plank from the wreck of paradise thrown upon the shores of idolatrous Greece." His political philosophy as set forth in the "Republic," his picture of the ideal state, has won for him the distinction of being the first scientific Socialist; the individual and the family, marriage, property, and all are to be sacrificed to the interests of the state. This dialogue is an inquiry into the nature of justice, and the solution is sought by examining into the constitution of a wisely organized state, as exhibiting the quality on a larger scale than that of the individual soul. The work is pervaded by a profoundly religious spirit.

Plato's "Republic" is accessible to English readers in the translation by Davies and Vaughan; and the whole series of his works in the translation by Professor Jowett, the first satisfactory complete English version.

CHRONOLOGY.

B.C.	Age	B.C.	Age
430 Birth.		389 Made voyage in Sicily	41
409 Began to hear Socrates	21	388 Returned; began to teach in	
399 Went to Megara	31	the Academy	42
395 Returned to Athens from tra- vels in Italy, Cyrene, and Egypt	35	367 Second visit to Sicily	63
		347 Died at Athens	83



ARISTOTLE.

384-322 B.C.

ANALYTIC PHILOSOPHY.

FIVE men in the world's history have achieved the summit of human greatness: Raphael, Mozart, Shakespeare, Cesar, and Aristotle. It is true that none of their claims are undisputed; by the side of Shakespeare stands Dante; the votes for Beethoven and Michael Angelo are better in quality if not in quantity; the name of Alexander is often mentioned before that of Cesar, and Plato before Aristotle; but in deciding the claims, if we ask which of these have been most useful to the human race, then there can be no question as to who shall stand on the right and who on the left of the entrance to the Pantheon. Raphael has been a hundred times more copied than any other painter; Aristotle has been a hundred times more studied than any other philosopher.

Aristotle, the "living encyclopaedia of antiquity," was born at Stageira,

384 b.c., his father occupying an important position at the Court of the King of Macedon. It is probable that from his father, who had written on Medicine and Natural History, he received his first ideas of, and inclination for science, but losing his parents very early, he came under the protection of Proxenus, with whom he resided till his seventeenth year.

At this time, 367 b.c., he came to Athens to enter the school of Plato. The great Academic teacher, however, was just starting on his second voyage to Sicily to the Court of Dionysius, where he remained three years. During his master's absence Aristotle allied himself with the principal disciples of Socrates, especially Xenocrates and Heraclides, and made himself familiar with affairs at Athens, which was then in the height of her glory, and, being independent as to fortune, he denied himself nothing that could serve to culture his mind and body. Although we can know nothing except the merest outlines of his life and habits, the evidence, after careful weighing, gives us only the impression of a life singularly honourable and blameless, devoted to incessant study.

On the return of Plato and the re-opening of the Academy, the young "Stagirite" gave proof of his superior talents and industry, and soon gained the name of "the intellect of the school," and the remark that he needed a bridle, while his more indolent friend Xenocrates had need of the spur. His residence at Athens for the next twenty years, until his thirty-eighth year, may be called the first period of his intellectual life, during which he was the pupil and warm friend of Plato, though differing somewhat in philosophical views. His literary efforts during these years were his dialogues, and a theoretical denunciation of Isocrates, leader of a school of rhetoric. Later, Aristotle followed the attack by opening a rival school, but does not seem to have impressed the Athenians with his superior knowledge of the laws of rhetoric, his reputation resting on his work composed many years later, in which appears none of his early petulance in speaking of Isocrates. His "Dialogues," published at the time, were expository and rhetorical, devoted to attacking Plato's doctrine of ideas, and setting forth his own views of the chief good, the art of government, philosophy, and morals.

In the year 348 b.c., Plato died, succeeded in the Academy by Speusippus; and at this time Aristotle, accompanied by Xenocrates, left Athens, and resided three years at Atarneus, the home of his early guardian. Here he enjoyed intercourse with his philosophical friend, Hermeas, whose adopted daughter or niece he married. The death of the wise and enlightened prince forced Aristotle to leave Atarneus, and he had resided almost three years at Mitylene, when called by Philip, King of Macedon, 343 b.c., to undertake the education of Alexander, then thirteen years of age. Alexander, from earliest years being more

inclined to the sword than the pen, it is hard to believe he acquired anything more than a knowledge of Greek, an interest in Homer and the Attic tragedians, with a course of rhetoric and mathematics. Aristotle, as tutor to the young prince, occupied a position of dignity, accompanied with abundant leisure for prosecuting his researches and independent speculations. He was authorized to rebuild his native city, Stageira, and construct there a palace, where he sometimes taught, associating with Alexander, Nearchus, Theophrastus, Callisthenes, and Ptolemy.

Although for a year before the assassination of Philip the duties of Aristotle as tutor were suspended, he continued to reside at Stageira. But in 335 b.c., when Alexander had really become the King of Macedon, and was preparing for his eastern campaign, Aristotle returned to Athens, and, it cannot be doubted, with considerable *éclat*, as the favoured friend and teacher of a great conqueror, who had ordered a marble statue of him to be erected at Athens, and who, it is said, furnished considerable means to prosecute his researches. Although it can be hardly credited that Alexander gave the magnificent sum of 200,000*l.* sterling, yet the certain fact is, that under the most favourable protection possible, Aristotle was permitted to commence in his fiftieth year the building of the great fabric of philosophy and science for which he had been so long preparing.

After twelve years of absence he found Athens somewhat changed. His old friend Xenocrates had become head of the Academy, and then it was that the great Stagirite founded his rival school, the Lyceum, in the neighbourhood of the Temple of Lycean Apollo, from which it received its name. Here Aristotle “walked and talked,” and it is from this singular habit of his promenading during his lecture that the name applied to his followers and school of philosophy, Peripatetic, comes. He made two promenades, that is, gave two lectures during the day, one in the morning, to the most advanced pupils, in which they discussed the more difficult questions of science ; the second, in the afternoon, to the larger and less advanced class. This indicates two kinds of teaching, the one secret, for the initiated few, the other public, for the fashionable and more promiscuous audience.

It is this last period of his life, when he set himself simultaneously to writing and teaching, that has the most interest for us, for the rich fruit time had arrived, and in that the bulk of his great works, which still astonish the world by their profundity and variety, were composed. For six years the amiable relations with Alexander existed, and then were only closed by the painful circumstances attending the death of Callisthenes, nephew of Aristotle.

But these circumstances occasioning the coldness which existed between pupil and teacher were forgotten when, in 323 b.c., Alexander

died, and the Athenians gave loose rein to their pent-up hate, and visited it upon all who were or had been in any way partisans of the Macedonian king. Aristotle was one of the first to be attacked. It being impossible to arraign him upon a charge of intrigue in polities, from which he had always held himself aloof, they accused him, as they had Socrates, of impiety for having consecrated an altar to his first wife and written a hymn to his friend. He did not want for enemies and detractors, for, absorbed in study and moving in a narrow circle of pupils and scientific friends, he may easily have been cold and reserved in general society, and, no doubt, possessed all those characteristics which he claims in his "Ethics," for the "great-souled man," "who demands great things for himself because he is worthy of them," and "who cannot be an associate with any except a friend."

Assured beforehand of his condemnation, he did not wait to be summoned to the Areopagus, but leaving the affairs of his school in the hands of Theophrastus, his best pupil, retired to Chaleis to await the end of the storm, and "to prevent the Athenians," as he said, "from sinning a second time against Philosophy." But before the storm had blown over, as it invariably must have done, the great philosopher was attacked with a malady of the stomach and died, 322 b.c.

No other philosopher has exerted so large an influence on so many centuries and on the ideas of so many nations as Aristotle. He may be regarded as the creator of natural science, the father of modern psychology, and the originator of the philosophical notions of "matter" and "form." He established the notions of "space" and "time;" showed their connection with matter, and furnished the first cosmological argument for the existence of God. His philosophical method consists in the principle that all our reasoning must be founded on the observation of facts.

The system of Plato carries the stamp of his taste for geometrical abstraction. Aristotle, wishing to do otherwise and better than he, constructed his system with the genius of naturalist, observer, and classifier. In the quality of observer he attaches the greatest importance to the experience of the senses. This it is that must prevail over abstract and theoretical reasoning. He distinguishes with perfect nicety the reasoning by deduction from the reasoning by induction. Notwithstanding the marked tendencies toward empiricism and sensualism, tendencies which he, no doubt, owed to the positive direction of his researches in natural and descriptive science, he has the same ideas as Plato as to the hierarchy of our knowledge; that the knowledge *par excellence*, is that of first principles and the reason of things, and that syllogism is its proper form. That which distinguishes both the character and philosophical system of Aristotle is the tendency to classification. His researches in Natural History, varied and profound for his age, have been much advanced

upon by modern naturalists, but his great point was, in fixing his attention on the relations of the individual to the species, the species to the kind, and that this suggested to him to push farther by abstraction the hierachial progression of beings, even to the supreme kind, the abstract Being.

"Contemporary science, if it was more enlightened and modest," says Barthelemy St. Hilaire, "would proclaim Aristotle its glorious ancestor and precursor; not that he alone made known to the Greeks everything known as science, but he is its most complete and most illustrious representative. He closes the period, for ever lost to human thought, when the too-varied domain of philosophy still comprehended all the sciences consolidated in one mass, which since then has been constantly undergoing division. No one has ever seized upon these things with so vigorous a hand as Aristotle, and he will remain an imperishable and inaccessible model to all ages. Among all sovereign geniuses he will remain the most extraordinary, if not the most attractive. He is in every way worthy of Greece, which alone could have given birth to such a son. At the head of the marvellous personages, of which she has transmitted the works and memories, stands Aristotle, whom his incomparable master named the Universal Understanding and Intelligence."

CHRONOLOGY.

B.C.	Age	B.C.	Age
384 Born at Stagira.		344 Went from Atarneus to Mitylene	40
367 Went to Athens	17	342 Invited to Court of Philip	42
364 Commenced to study under Plato	20	338 "Rhetorie"	46
363 Reputation established; rival of Xenocrates	21	335 Returned to Athens; marble statue is erected	49
347 Death of Plato; left Athens with Xenocrates for Atarneus	37	322 Accused of impiety; escaped to Chalcis	62



ST. THOMAS AQUINAS.

A.D. 1227-1274.

SCHOLASTICISM.

IT is stated that on the assembling of the Council of Trent, essentially a council of war against Lutheranism, the advances of which had rendered it necessary to reconstruct the dogmatic fortifications of the church, there was laid on the desk of the secretary to the council, beside the Bible, a ponderous folio entitled "Summa Theologiæ." It was the masterpiece of St. Thomas of Aquino, produced about three centuries earlier, which had long won acceptance and reverence as the highest authority in theology and philosophy, and was held to contain the final solution of all the problems which were to be discussed at the council. The incident is significant, not only of the extraordinary authority of the book, but also of the character which modern Romanism was to take from it.

The so-called scholastic philosophy, which represented the mode of

thought of the cultivated classes for several centuries of the period known as the Middle Ages, and impresses of which are still traceable in the beliefs and ways of thinking of modern Christendom, was not strictly philosophy at all. Its first principles were given by theology or the authority of the church ; and all that human reason was allowed to do was to strive to give these a form of science. The theology was that of the great Latin Father, Augustine ; the instruments applied to construct a formal science out of it were the logic and metaphysics (Dialectics) of Aristotle. Reason was thus merely auxiliary to theology. A closer alliance between these two appeared at a later stage ; and this was at length followed by the gradual emancipation and independence of reason. Of this system Thomas Aquinas is one of the chief expounders. He ranks as one of its five patriarchs, and amongst them is *facile princeps*. His personal title among the Schoolmen is the Angelical Doctor, or the Angel of the Schools.

He was born in 1227, of a great feudal family, the Counts of Aquino, whose seat was the castle of Rocca Secca, near the famous monastery of Monte Cassino. The family were connected with the Hohenstaufens, and thus with the Emperor Frederick II. Thomas received his earliest instruction at Monte Cassino, whence he passed, about 1240, to the newly-founded university of Naples. A thoughtful boy, fond of study from his earliest years, he was not eager to run with others the race of worldly ambition or to fight his way with the sword to honours and rewards. These things he rather shunned, and turned with longing to the secluded quiet of the monastic life, of which he had already seen something. Without the knowledge of his family he entered in his fifteenth year the Dominican convent at Naples, and steadfastly resisted all endeavours to change his purpose. It is said that being sent to France he was seized soon after setting out by his two brothers, who kept him in confinement for a year or more, till his release was ordered by the emperor.

He made profession as a Dominican in 1243, and then became a pupil of Albert the Great, at Cologne. From this master he learnt the doctrine which he afterwards taught, but in a form more precisely and decisively elaborated. Among his fellow-students his modesty and silence procured him the nickname of "the great dumb ox of Sicily." But when on one occasion a test was applied to his knowledge and capacity they found they were mistaken ; and the master declared that the lowings of this ox would one day resound through the world. With Albert he spent a short time at Paris ; and after their return to Cologne in 1248 he was ordained priest. It was probably about this time that he began to teach. In 1253 he again went to Paris ; and soon afterwards took a leading part in the defence before the pope of the Mendicant Orders against the assaults of the University of Paris. During his visit to Paris he became the friend

of the Franciscan Bonaventura, whose character, so unlike that of Aquinas, was indicated by his title of "Doctor Seraphicus." When he sought the doctor's degree at Paris the university resolved not to admit him; but so great was his renown as a teacher that they were compelled to rescind the resolution, and in 1257 he was received doctor of theology. He was admitted to intimate friendship with Louis IX.; and at the same time his authority as theologian was supreme throughout Europe. Two popes acknowledged him as the greatest theologian of his age.

In 1261 Pope Urban IV. on his accession called him to Rome, to assist in the difficult task of reconciling the Greek and Latin churches. The succeeding pope offered him the archbishopric of Naples; but this he declined, as he did other promotions and dignities. He was content to remain a simple monk, free to devote himself to the arduous task he had chosen. In 1269 he was once more at Paris; but was called again to teach at Naples in 1272. Pope Gregory X. having convoked a General Council at Lyon for 1274, the object of which was to formally settle the union of the Greek and Latin churches, Aquinas was summoned to assist. He set out—the winter was hardly over—and on his way visited the castle of Magenza, the seat of some of his kinsfolk. Here he suddenly fell ill of a fever, and by his own desire was removed to the convent of Fossa Nuova, where he died, still in the prime of life, on the 7th of March, 1274.

The possession of his remains was as eagerly coveted as his living presence and teaching had been. Miracles were of course alleged and believed to be wrought at his tomb. For nearly a century the dispute for his dead body was maintained between the monks of the convent of Fossa Nuova, the Order to which he belonged, and the University of Paris. It was at last settled in favour of the Dominican Order, and the body was removed in 1369 to Toulouse, where a splendid monument was erected to his memory. He had before this, in 1323, been canonized by Pope John XXII. The further honour was reserved for him of being two centuries later named, by Pius V., the Fifth Doctor of the Church.

It is sorry pastime to make merry over such a life and such labours as those of Thomas Aquinas; to dismiss them with laughter and scorn as the author of "Curiosities of Literature" does in his chapter on "Quodlibets." Far wiser and better were it to admire the lofty aim, the unselfish toil, the grand patience of the man, to recognize what portions of solid truth and wisdom he had grasped and taught, and what wholesome influence he exerted in the world, even if after all we have to make with a reverent sadness not for words the acknowledgment that his success was only relative and temporary; and that the problems which he attacked and believed, as the men of his time did, that he had solved, are still unsolved for us.

Aquinas was a man of distinctly philosophical temper. He saw and felt the chronic enigmas of human existence ; he faced them with astonishing boldness ; and the aim and hope of his life was to serve the world and the church by solving them. To this high task he early set himself with unselfish courage and devotion ; and by a lifetime of immensely laborious study accumulated all the learning of his own age, and thus equipped himself for the accomplishment of his grand design. It was nothing less than this—to effect a harmony of reason and revelation. His assumptions were that both were of divine origin and authority, and that no truth uttered by the one could contradict any truth uttered by the other. Disgusted with the obscurity and confusion which prevailed in the theologies of the age, he sought to introduce an orderly, consistent, and all-comprehensive system. He published several works which served as preliminaries to the *magnum opus*. Among these were a Commentary on the so-called “Sententiae” of Lombardus, and a “Summa Catholicae Fidei adversus Gentiles.” One great service must be mentioned which he rendered to philosophy—that of encouraging and obtaining a complete translation of the works of Aristotle directly from the Greek. Till then only portions of them had been known, and those very imperfectly by Latin translations from the Arabic. After a lifetime of preparation he spent at last nine years in the composition of the “Summa Theologiæ,” of which all we can now say is that it is one of the most astonishing monuments of human labour in the field of mediæval literature, that it was for centuries the oracle of Christendom, and that now it has fallen dumb, modern thought asking questions under quite new conditions. Historically it has one point of great interest ;—it was the first attempt to construct a complete system of theology and ethics combined. The system of St. Thomas, especially his view of the sovereignty of divine grace and of predestination, was assailed by Duns Scotus ; and a controversy was thus begun which was protracted through centuries between the followers of the two teachers. They were known as Thomists and Scotists.

When did the Middle Ages begin and when did they end ? Even if it were possible to draw a sharp line of “delimitation” for the beginning, how could the same be done for the end ? For are not the Middle Ages still here present ? Are not the forces which gave them their special character still dominant over a large part of the world, over millions of intellects and hearts of men ? What is one of the latest and most noteworthy reports that reach us from the Vatican ? That the pôpe has set on foot a movement for the promotion or revival of the study of the great work of St. Thomas of Aquino, and this on the ground that in its teachings alone is to be found the true rest of the intellect, the real salvation of the soul.

The best edition of the works of Aquinas is that of Rome, in 18 vols.

fol., published in 1570-71. Another edition was published at Venice in 20 vols. 4to., in 1745.

CHRONOLOGY.

A.D.	Age	A.D.	Age
1227 Born at Aquino.		1255 Doctor of Theology at Paris .	28
1240 Studied at Naples	13	1261 Summoned to Rome by Urban	
1243 Entered Dominican Order . .	16	IV.	34
1244-48 Studied at Cologne and		1269 Returned to Paris	42
Paris under Albertus Mag-		1272 Removed to Naples	45
nus	17-21	1274 Died at Fossi Mion	47
1248 Ordained priest; taught at			
Paris	21		



BACON.

A.D. 1561-1626.

INDUCTION—NATURAL PHILOSOPHY.

FRANCIS BACON, the youngest of eight children, was born in London. He was a delicate, intelligent child, with much curiosity for natural phenomena. His father was Lord Keeper of the Great Seal under Elizabeth, and when very young Francis was presented to the queen, who, amused with his bright talk, inquired his age, "I am two years older than your majesty's happy reign," replied he.

At thirteen years of age he entered Cambridge, which he quitted after two years' stay, without taking his degree, being little satisfied with the course of study that was followed, and being exceedingly disdainful of the lectures and professors of scholastic philosophy. He had hoped to learn at the University all that was to be known, but he was conscious of a great disappointment. "Men at the end of

the sixteenth century neither knew nor aspired to know more than was to be learned from Aristotle." It was at this time that a thought struck him which exerted an important influence on his after life. "If our study of nature be thus barren, our method must be wrong; might not a better method be found? From that moment there was awakened the appetite which cannot be satiated, and the passion which cannot commit excess."

He was living in the stirring times of the struggle between Elizabeth and the Nonconformists. As his mother was of that party he could not help imbibing something of its spirit, and surrounded by the influences of Court, in which circle his father's position placed him, the feelings of loyal aspiration in behalf of his queen and country would also take firm root; and finally, the idea that the fortunes of the human race might be redeemed by a better application of human industry, once having been entertained, he would want naturally to begin the process. "At this time of his life he probably became imbued with an interest in three great causes—the cause of reformed religion, the cause of his country, and of the human race."

After a voyage in France and the death of his father, he commenced the study of law, and in 1580 was admitted as barrister at Gray's Inn, his fortune not being enough to warrant a life devoted entirely to study and speculation. But a philosopher, who meditated already his plan of the renovation of the sciences, was incapable of being entirely absorbed in the profession of law. Being poor and aspiring to the leisure that wealth gives, he had his eyes incessantly turned towards the Court. Unhappily the Court regarded him as a speculator. "He has much spirit and instruction," said Elizabeth of him, "but in the law he soon shows the end of his knowledge; he is not profound." After that, however, she bestowed upon him a purely honorary position of Counsel Extraordinary to the Crown. His ambition pursued another aim, and he addressed a begging letter to his uncle Burghley, the Grand Treasurer, in substance this:—"I am no longer young; at thirty-one, the sands of life are already half-run. My desire has always been to obtain a modest place of her Majesty, not that I have the thirst of power and honour, like a man born under Jupiter or the sun. I see everything under the influence of a contemplative planet; my principal ambition would be to purge the sciences of the brigands who infest the domains of knowledge, the frivolous disputes, the blind experiments, the popular traditions; and to replace this sad baggage by observations and useful innovations. I desire then a place which shall leave me enough of leisure to realize this ambition."

Bacon was happier under James I., who succeeded Elizabeth in 1603. He pleased this monarch, who made such great pretensions to learning, and entering the House of Commons he obtained in 1604 the title of

Advocate-Ordinary to the King, with 40*l.* a year of appointments and a pension of 60*l.* He was in 1607 made Solicitor-General, and in 1613 Attorney-General. In this position we see him putting his eloquence and cleverness to the service of the king, espousing his bad causes, and under all circumstances showing himself the zealous and obsequious defender of the royal will. Always ready to lean his credit on a more powerful influence he attached himself to Buckingham, the favourite of James I, and obtained through him in 1617 the post of Keeper of the Great Seal. Aspiring still higher, he realized his ambition in being made Great Chancellor and Baron Verulam.

It was at this point of his highest elevation that ruin came. This period in his life is only too well known. The sagacious Elizabeth had judged well of the unfitness of the great philosopher for political life. "I was the justest judge that was in England these fifty years," pleaded the unfortunate lord; "but it was the justest censure in Parliament that was these two hundred years!" The rest of his public life is nearly a blank, but it is some consolation in this dreary time to know that his belief in the value and virtue and final success of his great enterprise was never shaken. "His earthly comforts were growing colder and colder," says Spedding. "The hopes which he had indulged, first of a comfortable provision for a life of study, then of help to overcome his debts, and lastly of bare means 'to live out of want and die out of ignominy,' had one by one fallen away and left him desolate. But that the 'mine of truth' which he was opening would keep its promise, and that Man would thereby in some future generation be the master of Nature and her forces, was a hope which continued with him to the end, and so refreshed and sustained his spirit, that if the compositions of his last years are distinguishable at all from those of his prime, it is rather by their greater conciseness, solidity, and rapidity of style, than by any signs of exhaustion or decay."

The manner of his death is noteworthy. Like Pliny he was a martyr to his cherished idea, the study of nature. While riding in the country on a cold winter's day, he alighted from his carriage to stuff the body of a newly-killed chicken with snow, an experiment to test the qualities of snow as an antiseptic. In the operation he caught a chill from which he never recovered, dying at a friend's house at which he was obliged to make, as he thought, a temporary halt of a few hours—but which he never left alive.

HIS WORKS. The keynote of the real workings of Bacon's mind is seen in an early treatise mentioned by Spedding.

"His old idea of finding a better study of the laws of nature, having no doubt undergone in the endeavour to realize it many modifications, had at last taken the shape of a treatise in two parts. The first part was to be called 'Experientia Literata' (and was to contain an exposition of

the art of experimenting), that is, of proceeding in scientific order from one experiment to another, making the answer to one question suggest the question to be asked next. The second part was to be called ‘*Interpretatio Naturae*,’ and was to explain the method of arriving by degrees at axioms, or general principles in nature; thence by the light of those axioms proceeding to new experiments; and so finally to the discovery of all the secrets of nature’s operation—which would include the command over her forces. This great speculation he had now digested in his head into these two parts, and ‘proposed hereafter to propound.’”

He believed that he had by accident stumbled upon a thought which duly followed out would in the course of generations make man the master of all natural forces. The “*Interpretation of Nature*” was, according to his speculation, the “kingdom of man.”

The two chief works of Bacon are the “*Advancement of Learning*” and the “*Novum Organum*.¹” The former is a sort of essay on the classification of the sciences, a survey of the entire field of nature; the latter is a logical method for the interpretation of nature, the machine for working the field. Practically his scheme of knowledge amounts to this:—

1. Concrete knowledge or natural history, embracing the history of natural bodies, fire, water, earth and air, &c. The history of artificial products, and including also civil, ecclesiastical, and literary history.

2. Abstract knowledge or science. Speculation: physics the science of nature, and metaphysics the science of form and cause. Practice: mechanics and magic, founded respectively on the two preceding sciences. Mathematics, anthropology, physiology, psychology, polities, logic, and morals. Such, though not precisely under these names, are the sciences which are to be studied by the new Baconian method. What that method was can be best seen by direct reference to the “*Novum Organum*” itself.

In 1620 he gave to the world the book which with ceaseless retouching had been commenced twelve times, and may be regarded as the one thought of his life. It was his “*Novum Organum*,” “the one of my books to which I attach the highest price.” In this work, as indicated by the title, Bacon proposes to substitute for the “*Organon*” of Aristotle the scholastic logic, the syllogism and principles generally posed *à priori*, a new “*Organon*,” a logic of experience and induction. This new logic was only presented as the instrument of a vast reform, and the second part of a greater work, of which the prologue, preface, and the general plan were comprised in the same book under the title of “*Instauratio Magna*.²

“Man, being the servant and interpreter of nature, can do and understand so much, and so much only as he has observed in fact or in thought of the course of nature; beyond this he neither knows anything nor can do anything.

“ Neither the naked hand nor the understanding left to itself can effect much. It is by instruments and helps that the work is done, which are as much wanted for the understanding as for the hand. And as the instruments of the hand either give motion or guide it, so the instruments of the mind supply either suggestions for the understanding or cautions.

“ Human knowledge and human power meet in one; for where the cause is not known the effect cannot be produced. Nature to be commanded must be obeyed; and that which in contemplation is as the cause is in operation as the rule.

“ The conclusions of human reason as ordinarily applied in matter of nature, I call for the sake of distinction *Anticipations of Nature* (as a thing rash or premature). That reason which is elicited from facts by a just and methodical process I call *Interpretation of Nature*.

“ I am of opinion that if men had ready at hand a just history of nature and experience, and laboured diligently thereon; and if they could bind themselves to two rules—the first, to lay aside received opinions and notions; and the second, to refrain the mind for a time from the highest generalizations, and those next to them—they would be able by the native and genuine force of the mind, without any other art, to fall into my form of interpretation. For interpretation is the true and natural work of the mind when freed from impediments. It is true, however, that by my precepts everything will be in more readiness, and much more sure.

“ Nor again do I mean to say that no improvement can be made upon these. On the contrary, I that regard the mind not only in its own faculties, but in its connection with things, must needs hold that the art of discovery may advance as discoveries advance.”

The end of all was to be the great philosophy of the future, which is *Active Science*. Here are a few of his prophecies as appended to the “New Atlantis.” The prolongation of life, the restitution of youth in some degree, the retardation of age, the curing of diseases counted incurable, the mitigation of pain, more easy and less loathsome purgings, the increasing of strength and activity, the increasing of ability to suffer torture or pain, the altering of complexions, and fatness, and leanness, the altering of statures, the altering of features, the increasing and exalting of the intellectual parts, conversions of bodies into other bodies, making of new species, transplanting of one species into another, instruments of destruction, as of war and poison; exhilaration of the spirits and putting them in good disposition, force of the imagination, either upon another body, or upon the body itself; acceleration of time in maturations, acceleration of time in clarifications, acceleration of putrefaction, acceleration of decoction, acceleration of germination, making rich composts for the earth, impressions of the air, and raising of tempests;

great alteration, as in induration, emollition, &c.; turning crude and watery substances into oily and unctuous substances, drawing of new foods out of substances not now in use, making new threads for apparel, and new stuffs, such as paper, glass, &c.; natural divinations, deceptions of the senses, greater pleasures of the senses, artificial minerals and cements.

While soaring on sublime heights we must not forget that the chief end of all speculation is practice, the philosophical is only a means to the practical : all science has prevision for its object.

CHRONOLOGY.

A.D.	Age	A.D.	Age
1561 Born in London.		1613 Attorney General	52
1573 Entered Trinity College, Cambridge.	12	1616 Privy Councillor	55
1577 Visited Paris	16	1617 Lord Keeper of the Great Seal	56
1579 Returned to England	18	1618 Lord Chancellor and Baron Verulam	57
1580 "Of the State of Europe"	19	1619 Viscount of St. Albans	58
1582 Called to the bar.	21	1620 "Novum Organum"	59
1597 "Essays"	36	1621 Charged with corruption; Great Seal sequestered	60
1603 Knighted by James I.	42	1622 "History of Henry VII."	61
1605 "Advancement of Learning"	44	1626 Died at Highgate	65
1609 "Wisdom of the Ancients"	48		



DESCARTES.

A.D. 1596-1650.

DEDUCTION.

RENÉ DESCARTES was born in Touraine, France, in 1596. His feeble health in childhood gave little promise of the mental vitality his early studies exhibited. The Scholastic methods of the Jesuit college he attended were little to his taste, but, happily, he was able to apply himself to the study of mathematics and the natural sciences, for which he showed more than usual aptitude. After completing his studies at college, he made several voyages, entered into the campaigns against Germany, and was present at the siege of La Rochelle. After this he retired to Holland, where he remained twenty years, devoting himself entirely to the study of philosophy. He learned to conceive it in a wider and more practical sense than was understood by his contemporaries, and

the novelty and excellence of his doctrines gave him admirers in all countries.

But a man who pretended to demonstrate the existence of God, the immortality of the soul, and the origin and truthfulness of our knowledge, in a manner different to the existing theories ; who sought, as it was said, to give a mechanical explanation of all the phenomena of nature, who advanced new opinions on almost all subjects, even the circulation of the blood ; a man, in fact, who boldly attacked Scholastic philosophy itself, was sure to offend and alarm those who taught and lived by teaching what he was striving to uproot. Enemies arose as well as admirers, endeavouring to entangle him in disputation and polemic writings. Failing in this, they attempted to ruin his reputation, and it was partly on account of this persecution that he determined upon accepting an invitation of the young Swedish queen to visit her, and settle in her domains. He feared the fate of Galileo, and though prevented from burning his manuscripts, by the advice of friends, in 1649, he left Holland for Sweden. After a four months' residence at the Court of Christiana, the rigorous climate and the complete change in his habits, which he made to please the admiring queen, proved too much for him, and he died of inflammation of the lungs, in his fifty-third year.

At a very early age Descartes became attached to the study of mathematics, showing a preference for algebra and geometry. At the age of nineteen, when renouncing the pleasures of the world he had passed two years in retreat, he gave his whole time to the study of geometry. In 1617, while he was in service in Holland, some one posted up in the streets of Breda, a problem to be solved. Descartes saw that all the passers-by stopped to read, but its being written in German made it unintelligible to him. He begged a man by his side to explain it. This man proved to be Beckmann, principal of the College of Dordrecht, and, amused at the idea of a young French officer being interested in a geometrical problem, he consented to explain it on condition that Descartes should solve it. The next morning, when the problem was carried to Beckmann solved, he was very much surprised, but soon found that the young soldier of twenty years knew much more of geometry than the old professor of mathematics at Dordrecht.

Virtue is perhaps rarer than talents, and the speculative philosopher is not always the practical philosopher, but Descartes was both. From his youth he had reasoned out his *morale*. In allowing doubt to supersede his opinions, he felt that he must hold to certain principles for self-conduct. These were his rules : to retain the religion in which he was born, and to obey at all times the laws and customs of his country ; to do nothing to endanger his future liberty ; to decide always in favour of the mean, for in morals all that is extreme is almost always vicious ; to strive to conquer himself rather than fortune, for it is easier to change

one's desires than the order of the world, and nothing is in our power but our thoughts ; to devote his life to the cultivation of the reason.

The first and shortest, yet most important work of Descartes, is his "Discourse on Method," published at Leyden, in 1637. This work may be considered the foundation of modern philosophical investigation, and breathes the spirit of the man with his bold, innovating genius, his exact observations, and vivid imagination. It is divided into six parts, with a preface of fifteen lines, describing its purpose and arrangement. He begins by insisting upon the necessity of a new method, and then lays down the rules on which it should be founded. The most important of these is "never to accept any statement as true which you cannot see yourself to be true." A second rule proposes to divide each difficulty into as many parts as possible in order to solve it the more easily. A third, to begin with the most simple and easily understood ideas, ascending by degrees to the more complex ; and a fourth requires that all the parts, however small, should be carefully numbered and systematically arranged, so as to be sure no part had been overlooked ; he would make philosophy as exact as mathematics. The author then lays down certain moral maxims deduced from his method, and seeks to establish the existence of God and the soul by the same method as a basis for the study of metaphysics.

It was the custom in Descartes' time to publish all learned works in Latin, a language known only to learned men. He revolutionized this custom by publishing his works in French, "appealing to the good sense of men," which he said was "fairly divided among all classes."

The "Discourse on Method" was completed by three other works, on dioptrics, meteors, and geometry, as examples of his method applied to science. The second contains, among other things, the earliest complete description of the cause of a rainbow ; the first describes the mathematical principles which should govern the construction of lenses for telescopes ; the third is the most important work, and with the "Discourse on Method," forms the most enduring monument of Descartes' genius ; he simplifies the investigation of curves and their corresponding equations by a system of co-ordinate lines, and by the same method brings the solution of negative equations within the scope of analytical geometry. Algebra owes to Descartes a simpler notation, the method of indeterminate co-efficients, and the first sketch of the theory of equal roots. He applied algebra to geometry, thus founding a new science — analytical geometry.

In his principles of philosophy he has laid down several natural laws. First, that all bodies remain in their existing state of rest or motion unless acted upon by extraneous causes. Secondly, that simple or elementary motion is always in a straight line ; space has no limits and is full of matter ; a vacuum cannot exist, nor can matter be divided into

ultimate atoms. His "Theory of Vortices" did away with that of Aristotle, and paved the way for Newton's discovery of gravitation. He starts on the ground that the whole universe is filled with matter, which is uniform in character, and then assumes that the motion given to this matter by the infinite power of God produces a host of more or less circular movements, forming vortices or whirlpools of matter; and that in the centre of the vortex a sun or star is formed.

But the principle of the great reform which he introduced was in his "Discourse on Method." He declared he could find nothing but doubt and uncertainty in the opinions of men on all subjects. He repeats what the sceptic philosopher had already said about the general reasons for suspecting all our so-called knowledge. Our senses, memory, and even the reasoning faculties deceive us, not merely in complex subjects, but even in the simple details of geometry. There seemed only one way to overcome the difficulty, and that was to make universal doubt the point of departure for a new method of reasoning. The one fundamental truth that our existence is proved by the fact that we think, was accepted by him as the foundation of all other truths. "I think, therefore I exist," is the first axiom he lays down. He does not attempt to deduce existence from any anterior fact. He does not demonstrate, he merely proposes an axiom, something known to every one which requires no syllogism to prove it. All his reasoning is based on the principle involved in this axiom, that nothing must be accepted as true which is not susceptible of proof. His method created a revolution in thought, for all through the Middle Ages, and even during the Renaissance, the guiding rule of philosophy had been authority, not certitude; the authority of great names, not a certainty based on self-evident axioms.

CHRONOLOGY.

A.D.	Age	A.D.	Age
1596 Born at La Haye in Touraine.		1644 "Principes de la Philosophie"	48
1604-12 At Jesuits' College at La Flèche	8-16	1644 Visited France	48
1616-20 Served in French army against Holland	20-24	1647 Received pension from King of France	51
1624-25 Visited Rome	28-29	1649 Went to Court of Sweden; "Traité des Passions de l'Ame"	53
1629 Retired to Holland	33	1650 Died at Stockholm	54
1637 "Discours de la Méthode	41		
1641 "Meditationes de Prima Philosophia"	45		



SPINOZA.

A.D. 1632 1677.

PANTHEISM.



BENEDICT SPINOZA (Baruch d'Espinoza), born at Amsterdam in 1632, was descended from a rich family of Spanish Jews. His early education was directed by a learned Rabbi, and in accordance with the Jewish custom of compelling every boy to acquire a knowledge of some trade, he learned to polish glasses for optical instruments. His study of Hebrew, the Bible, and Talmud while yet a mere boy, filled his mind with doubts, and he brought to his teachers more questions on political and religious history than they could satisfactorily answer. The expression of his liberal views in regard to religion caused him to be summoned several times in his youth before the Jewish Council, and culminated in his being excommunicated from the Synagogue when he reached the age of twenty-four.

Spinoza was not ill-pleased at this result, though it necessitated his leaving his home and family. He resided now with Dr. Vanden Ende, a physician and schoolmaster, whose beautiful and accomplished daughter, although she resolutely refused to accept the homage of the young Spinoza, assisted him greatly in his studies. Besides perfecting his knowledge of Greek and Latin, he began studying the works of Descartes, and upon the impulse arising from the circumstance of the great affinity between the Cartesian doctrine and that to which his doubts had conducted him, he resolved to break entirely and openly with the faith of his family and nation, and exchanged his Jewish name, Baruch, for the Latin form Benedict. But he did not confirm general report by becoming a Christian. He had no desire to be identified with any religious sect.

He resisted all endeavours to be bought or reasoned back into even an outward profession of the Jewish religion, and becoming persecuted, even to an attempt on his life, in 1656 he quitted Amsterdam, living at no great distance in the house of a friend. Afterwards he lived at Rhynsburg, and published here a simple analysis of the ideas of Descartes. But forced by reason of this book to leave the place, he retired to Voorburg, near the Hague, where he hoped to remain in unknown security. But it was not permitted, for curiosity and real admiration brought him scores of visitors, both idle and learned, and in 1669 he made another removal, fixing himself at the Hague, in close relationship with valued friends. Here he spent his remaining years, leading a quiet, studious life, exhibiting such frugality and simplicity that some have called it the life of an anchorite.

He declined to occupy a Professor's Chair at Heidelberg University, and refused the invitation of Louis XIV., made through Condé, to come to France. He stoutly resisted the efforts of friends to place him in a position of greater luxury, alleging that he wanted nothing that would distract him from his studies.

In 1670 Spinoza published his "Tractatus Theologico-Politicus," and on account of the noise it made determined to publish nothing more. But his "Ethics" was published the same year of his death, which took place in 1677, when he succumbed to an aggravated attack of consumption, with which he had been tainted from birth.

In general manner and conversation Spinoza was charmingly affable and gentle, appearing always the same, never too sad or too gay, never showing anger or discontent. He was simple in his attire, dressing like a burgher of his day, and of singularly industrious and regular habits. He made himself greatly beloved by his small circle of friends, while his talents and willingness to expound his theories gained him many admirers in foreign countries.

HIS WORKS.

"The unity of God and the world, of spirit and matter, of soul and body, which Malebranche had conceived in a purely ideal manner, becomes with Spinoza truth and reality. Starting from the idea of substance, as that which to exist has need of nothing else, he shows that the Cartesian notion of thought and extension opposed to each other is contrary to the true definition of substance. If there exists outside of God any other substance, then it has no need of God that it may exist, and it is consequently independent. If, on the contrary, all that one considers as outside of God is dependent on Him, one must deny that there is any substance outside of Him ; God, therefore, is the only substance. His essence is not merely infinite thought, as Descartes supposed, but matter (*res extensa*), which had been placed apart from Him by that philosopher, is actually an attribute of God, just as thought is His attribute. Thus, thought and extension, spirit and matter, are two fundamental attributes, two modes by which the unique substance reveals itself to us. The distinction between God and the world is only a logical distinction ; that is, these terms are different names of the same essence. The universe, inasmuch as its totality is the foundation of all particular existence, *natura naturans*, is God. On the other hand, the assemblage of accidents by which the fundamental essence presents itself to our observation, *natura naturata*, is properly called the world."—(Baring-Gould.)

Spinoza made it his principle to admit nothing to be true which he could not recognize on sufficient grounds ; and endeavoured to found a system which should deduce the fundamental principles of moral life by strictly mathematical demonstrations, founded on the knowledge of God. To this end he called his system one of Ethics.

"Most of the writers on the affections of man and the conduct of life," he says, "appear to treat, not of natural things, which follow the usual laws of nature, but of things beyond nature ; they seem, indeed, to conceive man as an *imperium in imperio*. For they believe that man rather disturbs than conforms to the order of nature, and, further, that he possesses absolute power over his actions, being influenced and determined in all he does by himself alone. And then they refer the cause of human shortcomings and inconsistencies to no common natural power, but to some—I know not what—vice or defect in human nature, which they forthwith proceed to lament, to deride, to decry, and even more generally to loathe and to execrate ; so that he who discourses upon the infirmities of the human soul with more fluency and fervour than common is looked upon as a kind of divine or inspired person.

To such persons it will doubtless appear strange that I should set about treating the vices and follies of mankind in a geometrical way, and

seek to demonstrate on definite principles things which they cry out against as repugnant to reason, as vain, absurd, and even horrible. Yet such is my purpose, for nothing happens in nature that can be ascribed to any vice in its constitution, nature being ever the same, everywhere one, and its inherent power, and power in act identical. I shall in a word discuss human actions, appetites, and emotions precisely as if the question were of lines, planes, and solids."

The chief good, according to Spinoza, is to live a life freed from passion, comprehending the order of things by the highest exercise of the intellect, the knowledge and love of God.

He concludes his great work thus:—

"In what precedes I have delivered all I wish to say in connection with the freedom of the mind. And now we are able to appreciate the wise at their true worth, and to understand how much they are to be preferred to the ignorant, who act from mere appetite or passion. The ignorant man, indeed, besides being agitated in many and various ways by external causes, and never tasting true peace of mind, lives in a state of unconsciousness of himself, of God, and of all things, and only ceases to suffer when he ceases to be; the wise man, on the contrary, in so far as he is truly to be so considered, scarcely knows what mental perturbation means; but conscious of himself, of God, and of that special, eternal necessity of things, never ceases from being, but is always in possession of true peace of mind."

CHRONOLOGY.

A.D.	Age	A.D.	Age
1632 Born at Amsterdam.		1670 "Tractatus Theologico-Politicus"	38
1656 Excommunicated by the Synagogue; leaves Amsterdam	24	1673 Declined Chair of Philosophy at Heidelberg	41
1660-64 Lived at Rhynsburg	28-32	1677 Died at the Hague	45
1663 "Renati Descartes Principiorum Philosophiae," &c. . .	31	1677 Publication of the "Ethics."	
1664 Settled at Voorburg; "Cogitata Metaphysica"	32		



JOHN LOCKE.

A.D. 1632 1704.

SENSATIONALISM.

In the long roll of illustrious Englishmen there are few names more worthy to be held in honourable and even loving remembrance than that of John Locke. One of the greatest among the men of thought, and at the same time one of the purest, most useful, and most disinterested among the men of action, his life presents to us an example of the combination of two forms of activity usually supposed to be incompatible, the philosophical and the political. In addition to these, the public aspects of his life, we must note the charm of his private character, and the story of the friendships in which his affectionate nature found its repose and joy.

As philosopher, Locke is generally recognized as founder of the so-called Sensational school. His claim to this distinction is disputed by some writers, who assign it to his predecessor, Hobbes. The fundamental

principle of Locke's system, the derivation of all our knowledge from experience through the senses, is undoubtedly laid down by Hobbes with the utmost clearness. But so wide is the difference between the two thinkers on momentous points, that it is absurd to look upon Locke as a copier or plagiarist from Hobbes. Their agreement in their starting-point is explained by the fact that they were both students of Bacon, and both adopted the method which he had then recently expounded in relation to physical research, and applied it to the study of mind. It is even doubtful whether Locke ever read the works of Hobbes.

As a political writer Locke stood ahead of his age as the fearless and consistent upholder of civil freedom and religious toleration. His influence was widely felt at the crisis of the Revolution, and contributed to the establishment of the new order.

The effect on general modes of thought of Locke's system of philosophy, which rapidly spread, not only in his own country but in France, Holland, and Germany, within the century following its publication, exemplifies the truth that "in every age the speculative philosophy in general acceptance will influence the theology of that age."

Locke was born at the village of Wrington, in Somersetshire, on the 29th of August, 1632. At that time Bacon had been dead six years. Hobbes had reached middle age, and Descartes was in studious retirement in the Netherlands. Pascal was nine years old, Milton was taking his degree of M.A., and Spinoza was born the same year. Locke's father was a country lawyer of superior intelligence, who served under his friend Colonel Popham, in the parliamentary army. In 1646 Locke was sent to Westminster School, which at that time had for headmaster Dr. Busby. In 1652 he entered Christ Church College, Oxford. Like Bacon and Hobbes before him, Locke was disgusted with the barren studies in philosophy and theology then imposed, and gave himself with hearty interest to the classics, and to the reading of Bacon and Descartes, not without admixture, it is said, of romances. He took his degree of B.A. in 1655, and that of M.A. in 1658. His father, towards whom he cherished the highest respect and love, had died in 1661. In the relations between father and son, and in some other particulars, Mr. Fox Bourne, the latest biographer of Locke, points out an interesting parallel with the case of J. S. Mill. For some time Locke hesitated as to the choice of a profession; and at length decided in favour of the medical.

He entered upon his political career in 1665, as secretary to the ambassador to the Elector of Brandenburg; and having acquitted himself well he was offered a similar post at Madrid. He preferred, however, to continue his studies, and therefore returned to Oxford. By a special dispensation he was relieved from the customary obligation of the students of Christ Church of taking holy orders. It was in 1667 that his lifelong intimate acquaintance with Lord Ashley (afterwards first Earl of Shaftes-

bury, the “Achitophel” of Dryden’s great satire) began. He became a member of the noble household, as physician, tutor to the only son, and confidential adviser on public and private concerns. He was now introduced to many eminent persons; among them, to the Dukes of Northumberland and Buckingham, and the Earl of Halifax.

While Lord Ashley was Chancellor of the Exchequer, Locke was charged with the drawing up of a constitution for Carolina, then lately granted to Lord Ashley and others. His scheme gave less satisfaction to the colonists than to the proprietors. In 1672 he was appointed Secretary of Presentations, and in the following year Secretary to the Council of Trade and Plantations. This post brought him plenty of hard work, with merely nominal pay. In 1675 he went for health’s sake to the south of France, and remained there several years. Recalled to England in 1679, Lord Shaftesbury being then President of the Council, he appears to have resumed his student life at Oxford. He did not escape suspicion of being implicated in the plot in favour of Monmouth; but he resolutely held his tongue, and there is no evidence against him. When Shaftesbury fled to Holland, Locke followed him and remained there several years. So obnoxious was he to the Court, that by an arbitrary act of the King, Charles II., he was expelled from Christ Church; and his person was afterwards demanded of the States-General as a conspirator. He escaped, however, by temporary concealment. During his stay in the Netherlands he became acquainted with Limborck, Leclerc, and other men of mark. And in his enforced retirement he completed his great philosophical work, projected in 1670. His first “Letter on Toleration” was published in Holland.

After the Revolution he returned to England, where hearty welcomes and assured safety awaited him. He declined the offered post of ambassador to Berlin, but accepted that of Commissioner of Appeals; and in 1696 the more important appointment of Commissioner of Trade and Plantations. He became the ruling spirit of the Council, and rendered services of great value. Locke took warm interest and active part in the establishment of the Bank of England, the abolition of the censorship of the press, reform of the coinage, and the promotion of the Irish linen manufacture.

A good deal of obscurity still rests upon Locke’s relations with Shaftesbury. How it was possible for a man such as Locke to remain throughout the intimate friend of a man such as Shaftesbury, if the common opinion of them be just, is certainly an enigma. Christie, in his biography of the earl, and Fox Bourne, in his biography of Locke, both maintain the purity and patriotism of the earl; and this, if proved, is the vindication of the philosopher. But there are some strange facts to be explained. According to tradition the autobiography of Shaftesbury was burnt by Locke. All important documents bearing on the case among the Shaftes-

bury papers have disappeared. Locke stood in the thick of the political turmoil with the Minister of State, and yet not a trace of his feelings about it is to be found in his extant letters.

As man of letters, Locke's first work was the "Adversariorum Methodus," a new method of a common-place book (1686). Having completed his great work, the "Essay concerning Human Understanding," he drew up an abstract, which was translated into French by Leclerc (1687). The next year appeared the first "Letter on Toleration." In 1690 the "Essay" was published, and immediately attracted the thoughts of men to an unusual extent. Six editions were issued in the author's lifetime; and by means of translations into French and Latin it soon became famous all over Europe. An attempt was made to exclude it from Oxford University. About the same time with the "Essay" Locke published his "Treatise on Civil Government," and his second "Letter on Toleration." These were followed by two other "Letters on Toleration," the last of them a posthumous publication, "Thoughts upon Education," a work "On the Reasonableness of Christianity," with two Vindications, and several theological works. His well-known book "On the Conduct of the Understanding" appeared after his death.

Locke's object in his great work was, as stated by himself, "to inquire into the *original, certainty, and extent* of human knowledge." Rejecting the Cartesian doctrine of innate ideas, he taught that the mind is a mere *tabula rasa*, capable of receiving impressions through the senses; and that the ultimate sources of all our "ideas" (mental presentation) are these impressions through the senses and the subsequent operations of the mind upon them, which he called Reflection. He saw the subjective, relative nature of human knowledge, and foresaw the possibility of the Idealist and Sceptical systems afterwards built upon his foundations. Nevertheless he maintained the possibility of a demonstrative knowledge of the existence of God and the immortality of the soul. Whatever may be the shortcomings of Locke's philosophy—and they are real and important—though it fails, like all other systems, to solve the problems of our being, no reader of his "Essay" can refuse to recognize in it the work of a patient, original thinker, a sagacious observer, an accurate recorder, an earnest lover of truth, an honest and modest man. To the attractions of the subject is added the charm of a homely, racy speech, welcome and refreshing to those who love to draw from "wells of English undefiled."

Locke was never married; but his nature was eminently social, and one of the great charms of his biography is the story of his friendships and domestic relations. He suffered habitually from ill-health, but by temperate habits his life was prolonged to more than three-score years and ten.

About the same time that he published the "Essay" he took up his abode in the house of his friend, Sir F. Masham, at Oates, in Essex; and

there he spent the last years of his life. His friendship with Lady Masham began in 1683. She was the daughter of the philosopher, Ralph Cudworth, and inherited her father's love for philosophy and learning. Her young step-daughter, Esther Masham, was a special favourite of the philosopher. After a long decline, soothed by the tender ministrations of this family, Locke died, in the arms of Lady Masham, on the 28th of October, 1704. His remains were interred in the family tomb of his friends at High Laver Church, and a tablet was set up to his memory. In 1855 the tomb, which had fallen into decay, was restored ; and among the contributors to this restoration were Victor Cousin and Barthélemy Saint-Hilaire.

CHRONOLOGY.

A.D.	Age	A.D.	Age
1632 Born at Wrington, near Bristol.		1689 "Letters on Toleration"	57
1651 Entered Christ Church, Oxford	19	(written 1667)	
1658 Received degree of M.A.	26	1690 "Essay concerning Human Understanding"—"Treatise on Civil Government"	58
1666 Accepted invitation to reside with Lord Ashley	34	1693 "Thoughts on Education"	61
1668 Visited France	36	1695 Commissioner of Trade; "On the Reasonableness of Christianity"	63
1672 Secretary of Presentations	40		
1675 Visited France	43		
1682 With Shaftesbury in Holland	50	1704 Died in Essex; "Of the Conduct of the Understanding"	72
1686 "Adversariorum Methodus".	54		
1688 Returned to England; Commissioner of Appeals	56		



LEIBNITZ.

A.D. 1648-1716.

OPTIMISM.

LEIBNITZ was a native of Leipzig, where his father was a Jurist and Professor of Moral Philosophy. The teacher at the University was Thomasius, a man versed in the history of ancient philosophy, a professor who taught his pupils to respect the time-honoured Aristotle and the scholastics, as well as the new-fashioned system of Descartes. But the young Leibnitz, who even at the age of fifteen was a "learned scholar and self-taught thinker," hesitated to accept unconditionally the old master's teaching and deliberated with himself "whether to adhere to the doctrine of Substantial Forms, or declare in favour of that of Mechanism." The latter doctrine won, and before his boyhood was hardly completed, he began the career that made him the most extensive thinker and writer in Europe.

He studied Mathematics at Jena, and Law at Altdorf, where he took the degree of LL.D., when only twenty years of age. He had no inclination for becoming a professor, but sought intercourse with scholars and statesmen. In his travels in Germany he was received with favour by Electors and Counsellors, and composed various theological and political treatises. He aimed at a consolidation in one body of Protestants and Catholics; his idea was, a universal religion, a universal empire, and a philosophical language.

After visits to Paris and London, he became Librarian at Hanover, in 1676. He had visited Spinoza in Holland, had held correspondence with Huyghens and Newton, and had laid before Louis XIV. a plan for the conquest of Egypt. At Hanover, in 1684, he published his Integral Calculus, "the continuity of nature," and as a result of conversations with the Queen Sophia Charlotte, his essay on "The Goodness of God, Liberty of Man, and Origin of Evil."

In 1704 was penned his review of Locke's "Essay on the Understanding," in which he maintained that the ideas of substance, identity, truth and goodness exist potentially in the mind. In 1712 he removed to Vienna, was elevated to the ranks of the nobility, made Councillor, and consulted by Peter the Great. He wrote for Prince Eugene, the summary of his philosophy under the title of "Monadology" at this time, and originated the founding of academies of science at Berlin and St. Petersburg. Shortly after this he returned to Hanover, where he died, in 1716.

As a child he had been exceedingly precocious, much given to reading the Latin Classics and exercising his speculative and inventive faculties; as a man he was "extremely conceited," an incessant worker, fond of adulation and the comforts of life. He was never married, and during his bachelor life acquired many habits, which are in strange contrast with those of the methodical, exercise-taking Kant. It was a common occurrence for Leibnitz to remain at his work for several days, sleeping and eating as nature required in his chair—so absorbed did he become. He even acquired the habit of eating his heartiest meal just before retiring, that he might save time, saying that "digestion went on as well during sleep as at any time, and didn't interfere with his thinking." As to exercise, he took so little, that during his later years he suffered greatly in his lower limbs, and used often to lament they were not as sound as his head and stomach.

HIS WORKS. The ambition of Leibnitz was to conciliate all things. "I have been struck," he said, "with the idea of a new system; for I believe I see the interior of things in a new light. This system would reconcile Plato with Democritus, Aristotle with Descartes, the Scholastics with the moderns, theology and morals with reason. I would take the best from all, and push the matter further than it has yet gone."

According to Leibnitz, nature and spirit correspond, the laws of thought are those of things. If we would comprehend the first principles of nature, let us study our reason. Reason has two great laws which it applies as soon as experience furnishes occasion. The first is the axiom of contradiction ; that at the same time and under the same conditions, a thing can exist and yet not exist ; the second is the axiom of sufficient reason : nothing can exist without a reason which suffices to explain it.

The axiom of contradiction corresponds to the *possible*, that of the sufficient reason to the *actual*. But it is not enough that a thing exists actually, as established by the axiom of contradiction ; there must still be a sufficient reason why it has passed into existence and is realized in creation. This reason, according to the "Théodicée" of Leibnitz, is order, suitableness, and harmony, the universal well-being. In the mind of man the principle ought to be established that all is good, that all is beautiful, that all is regular, and in order ; that nothing exists which ought not to be.

Experience without reason only furnishes the connections or associations of images as those which serve to guide animals. Man, alone, according to Leibnitz, is acquainted with the chain of reasoning. This superior faculty bears the same name as its object, reason. And what is there innate in this faculty ? Itself. This theory sufficed to overthrow that of the sensualists defended by Locke, who had affirmed, "*Nihil est in intellectu quod non prius fuerit in sensu,*" while Leibnitz added "*Nisi ipse intellectus.*"

In possession of the great laws of the intelligence, the next step is to proceed to the study of things themselves, to go from the ideal order to the real order, which is only an expression according to Leibnitz, who affirmed that in nature, reason found only itself.

Space, he argued, is not a real existence, but a pure relation of co-existence. To attribute to it a proper reality is to admit, as Descartes has seemed to do, the passivity of substances and to introduce into the universe *inertia* and *torpor*. Leibnitz had barely escaped being seduced by this system earlier in life. But he felt its insufficiency, and to the pantheism of Spinoza, to the occasional causes of Malebranche so nearly related to Spinoza, to the purely mechanical theories of Descartes, he opposed the activity of the individual substance. To be, is to act. Creative act did not produce simple phenomena which would be then only the modes of God, but it deposited in beings a *force* or intimate virtue, from which could proceed naturally their actions as well as their passions. If mechanism accounts for visible nature by the laws of motion, it does not give the invisible reason of these laws nor the reason of motion, and consequently does not explain itself. In a word the surface of things is explained by *mechanism*, while the depths of things can only be explained by *dynamism*.

"The theodoxy of Spinoza," says Baring-Gould, "had started from a substance, one, infinite, the base of the world, impersonal and undetermined. Leibnitz opposed to this the hypothesis of a living primal force. Matter, which Anaxagoras and Plato among the ancients, and Descartes and Spinoza among the moderns, had regarded as inert, became in the system of Leibnitz the sensible revelation of motion; life and force. Spirit he supposed to be, not thought only, but a virtuality, an essence endowed with original ideas, which are not innate in man under an adequate form, but exist *virtualiter*, *potentialiter*. Spinoza deduced all things from the sole substance, and was consequently obliged to sacrifice individualities to the unique general Being. Leibnitz, on the contrary, considered all things as the reunion of an infinite number of essences or independent forces, active, living, distinct, indivisible, imperishable, without form or extension, to which he gave the name of *monads*, that they might not be confounded with the atoms of Democritus and Epicurus. Each of these monads differ from the other, not in kind, but in degree. Each is a little complete being in itself, and reflects, as in a mirror, the entire universe or God. The world is an assemblage of these monads. Each monad, by nature of the independent inherent force in it, is without natural relationship to the other monads. Their bond of union is a pre-established harmony, as Leibnitz called it, in virtue of which, without destroying the independence of these primitive forces, he considered them to be so constituted that their mutual development in no way clashed, but on the contrary worked towards a harmonious end. This pre-established harmony is due to God, the author of these living monads."

For pure geometry he substituted dynamics or geometry in action.

CHRONOLOGY.

A.D.	Age	A.D.	Age
1646 Born at Leipzig.		1684 "Règles du Calcul Différentiel"	38
1661 Entered University at Leipzig	15	1692 Took part in project to unite Protestants and Catholics .	46
1664 Received degree of M.A.; "De Principio Individualitionis"	18	1693 "Codex Juris Gentium Diplomaticus"	47
1665 Received degree of LL.D. at Altdorf	19	1702 President of Academy of Sciences, Berlin	56
1666 "Tractatus de Arte Combinatoria"	20	1707 "Scriptores Rerum Bruns- vicensium"	61
1669 Councillor of State	23	1710 "Théodicée"	64
1672-74 Visited Paris and London	26-28	1711 Aulic Councillor under Charles VI.	65
1676 Librarian to Duke of Brunswick-Lüneburg; again visited London	30	1714 Visited England	68
		1716 Died at Hanover	70



GEORGE BERKELEY.

A.D. 1685-1753.

IDEALISM.

AMONGST the evidences of a revival in recent years of interest in metaphysical studies, one of the most noteworthy was the appearance in 1871 of a new edition of the works of Berkeley, founder of the modern philosophical system known as Idealism. It is accompanied by a new biography, compiled by the editor, Professor Fraser of Edinburgh University, with such illustrative documents, letters, &c., as were discoverable by eager and diligent research. It was in the same year that Professor Jowett gave to the world his translation of the complete works of Plato, also an Idealist, but in a sense different from the Berkleyan.

The Idealist system of Berkeley was an offshoot of the system of Locke; and in its construction the author was impelled by a distinctly religious motive. Seeing the consequences that logically flow from

Locke's doctrine, it was his aim, while accepting this doctrine as a starting-point, to strike out a new path by which to arrive at a new conclusion, and once for all cut the ground from under the feet of the Free-thinker, the Atheist, and the Materialist. It is not too much to say that Berkeley, Butler, and Wesley who were for half a century contemporaries, were essentially fellow-workers towards the same end, though on different levels. That men might believe in God, and lead holy and devout lives—for this it was that Wesley fervently preached, and Butler calmly reasoned, and Berkeley philosophized.

Hardly anything is known about Berkeley's family, but it was probably of English origin. His birthplace, usually said to be Kilerin, was more likely Dysert-on-the-Nore, near Thomastown, in Kilkenny. The district is one of the loveliest in Ireland. He was born on the 12th of March, 1685, a few weeks after the death of Charles II. Milton had died eleven years before ; Spinoza was eight years old ; Butler was born seven, and Voltaire nine years later. Among the great contemporaries of Berkeley were Johnson, Pope, Addison, Swift, Newton, and Hume. Berkeley's father was an officer of the Customs, whose family consisted of two sons and one daughter.

At the age of eleven he was sent to the famous Kilkenny School, called the "Eton of Ireland," and although so young he took his place at once in one of the higher classes. Here he studied about four years, and in March, 1700, he entered Trinity College, Dublin. Scholastic logic and metaphysics still formed part of its curriculum ; but the tide of reaction against them was already pressing in, and the names and works of Descartes, Malebranche, Locke, and Newton, were becoming familiar. Of Berkeley's mental life during this period a deeply interesting record is presented to us in his Common-place, or Note Book, which has been brought to light by Professor Fraser. It shows that he took an eager interest in the new philosophy and the new science. But the special feature of the period was the dawning upon his mind of some new principle in philosophy, the perception of which filled him with a rapture of delight and hope, such as accompanies only the births of genius. Absorbed in his vision, he appeared to observers strange and eccentric. And as the plodders did not, could not, understand him, they laughed. Although only twenty-two he made a beginning as author anonymously, in 1707, with two tracts on arithmetic and mathematics. He had taken in 1704 his degree of B.A. ; and in 1707 he took that of M.A., and was chosen to a fellowship in his college. Two years later he was ordained de. con.

The same year (1709) appeared the first of his great works, the "Essay towards a New Theory of Vision." It was an application of his new principle without any announcement of the principle itself. It set forth one of the three philosophical discoveries which the world owes to him,

the doctrine of the acquired perceptions of sight. It enforced attention ; and a second edition was called for within a year.

In his next work, the "Treatise concerning the Principles of Human Knowledge" (1710), he announced and expounded the new principle. The book was a systematic assault on scholastic abstractions ; and especially a protest against the philosophical doctrine respecting matter, as the invisible substratum of the objects of sense. It was misunderstood, misrepresented, and ridiculed. Johnson's impromptu refutation of Berkeley's theory is well known. But although Berkeley declared that he agreed with the vulgar in belief of the existence of what is seen, felt, tasted, and touched, yet as he identified "ideas" with objects, and asserted that objects cannot exist without a perceiving mind, his agreement with the vulgar lies within exceedingly narrow limits. He set the highest value on that part of his theory which asserted that ideas [a term used by him in the sense both of sensations and images] have a permanent existence in the mind of God ; for this seemed to him to furnish an irrefutable argument for theism. The remorseless logic of fact has not only consigned his favourite argument to total neglect, but has shown that his philosophy, which was to be a new bulwark to the Christian faith, became instead a new stepping-stone towards the dismal shore of universal scepticism. Berkeley's challenge remained unanswered. His argument, says Coleridge, if his premise be granted, is a chain of adamant. His conclusion is nevertheless unbelievable.

In his "Discourse of Passive Obedience" (1711 ?) Berkeley appears as the advocate of high Tory principles, pleading not indeed for the divine right of kings, but for slavish submission to governments, whatever they may be. Sacheverell's famous sermons had been preached two years before ; and in the excitement of the time suspicion fell on Berkeley, and threatened to hinder his promotion in the Church.

He was tutor in Trinity College, nominally from 1712, but actually from 1707 till 1724. In 1712 he visited England and stayed several months. He paid a second visit the next year, and was presented at court by Swift. During this visit he was introduced to Pope, Addison, Steele, Samuel Clarke, and Bishop Atterbury. He contributed to Steele's "Guardian," and perhaps met Anthony Collins, who had just published his "Discourse on Freethinking."

In 1713 Berkeley published a popular exposition of his system in the "Dialogues between Hylas and Philonous," in which, says Professor Fraser, occur "the most pleasing passages of fancy to be found in English metaphysical literature." In the following year he went abroad as chaplain to Lord Peterborough ; but the philosopher and the soldier saw little of each other. In 1715 he again travelled as tutor to a gentleman's son, and was absent till 1720. He kept a diary of his Italian travels, full of vivid details. During this absence he contributed to the

French Academy his essay, "De Motu," an account of the most essential feature of his philosophy, his spiritual theory of the nature of causation. In 1721, in the midst of the agitation and social havoc caused by the bursting of the South Sea Bubble, he published an "Essay towards preventing the Ruin of Great Britain." It was the cry of a prophet, a call to repentance, and to individual reformation of spirit and of life. About the same time he returned to Ireland, and was chosen preacher to the University. In 1722 he was appointed Dean of Dromore, and also Hebrew Lecturer and Senior Proctor. Some months later his worldly wealth was increased by the bequest to him by Swift's "Vanessa" of half her fortune. He had only once met her.

In 1724 the rich deanery of Derry was given to him. But he had just conceived a new religious project, and for its sake was more anxious to resign his deanery than most men would be to get it. The project was of a mission to the North American Indians and a college in the Summer Islands (Bermudas), for the training of missionaries. Wealthy friends aided him, and the Government promised a grant of 20,000*l.* In 1728, having completed his preparations and taken a wife, he sailed for Rhode Island. Here he spent three years, took a farm, studied, wrote, and enjoyed social intercourse, receiving the while the income of his deanery. In 1731, all hope of government aid being extinguished, he relinquished the scheme and returned home. Resolved to bear himself the loss attending his enterprise, he returned all subscriptions to the donors.

In his "Alciphron, or the Minute Philosopher" (1703), Berkeley showed himself second only to Plato as a writer of philosophical dialogue. This work was directed against the Freethinkers; but except as the production of so eminent a man, says J. S. Mill, it would have little claim to serious attention. Berkeley was promoted to the see of Cloyne in 1734, and there he spent eighteen years, suffering from ill-health, but happy in his family and among his books, and faithfully discharging the duties of his office. His next work was "The Analyst," addressed to infidel mathematicians. He vigorously exposed defects and shortcomings in the current doctrines of the higher mathematics, which were not fully remedied till our own time, by the labours of Professor de Morgan. Berkeley's later writings were "The Querist," dealing with social and economical subjects; "Siris," in which he sets forth the medicinal virtues of tar-water, passing at the close into the highest region of metaphysical speculation; two letters to the Roman Catholics of his diocese and their clergy; "Maxims concerning Toleration," and "Further Thoughts on Tar-Water." A heavy blow fell on him in 1751, in the death of his second son, too deeply loved, he says. Then, wishing to remove to Oxford for the sake of his son George, who was studying there, he petitioned the king for leave to resign his see. George II. replied that he might live where he liked, but that he should die a bishop in spite of

himself. In the autumn of 1752 he removed to Oxford. He was very feeble at the time ; and on the 14th of January, 1753, just six months after Butler's death, he died suddenly and quietly in the midst of his family. His remains were interred in Christ Church, and a monument was erected to his memory.

As a philosopher, Berkeley is pronounced by J. S. Mill to be of all metaphysicians the one of greatest philosophic genius ; adding that of him alone it can be said that we owe to him three first-rate philosophical discoveries, each sufficient to have effected a revolution in psychology, and that these discoveries made him the turning-point of higher philosophy in modern times. "Psychology and Metaphysics before and after Berkeley differ almost like ancient and modern history or ancient and modern physics."

As a man, Berkeley has been called "one of the darlings of the human race." A character of such purity, simplicity, generosity, so free from covetousness, ill-temper, pride, and self-seeking, is rare in any age. In all societies he won his way to men's hearts ; they could not choose but admire and love and zealously serve him. Even the savage, treacherous Swift was uniformly kind and faithful to him.

Berkeley had three sons and one daughter ; but his family became extinct early in the present century.

CHRONOLOGY.

A.D.	Age	A.D.	Age
1684 Born at Kilerin.		1724 Made Dean of Derry . . .	40
1707 Fellow of Trinity College, Dublin	23	1725 "A Proposal for Converting American Indians" &c. . .	41
1709 "Theory of Vision"	25	1728-31 Visited America . . .	44-47
1710 "Principles of Human Know- ledge"	26	1732 "The Minute Philosopher" .	48
1713 "Dialogues between Hylas and Philonous"	29	1734 Consecrated Bishop of Cloyne	50
		1753 Died at Oxford	69



DAVID HUME.

A.D. 1711-1776.

SCEPTICISM.

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THE late Lord Lytton in one of his novels points out that what a man is personally and in his private relations is of little importance to the world in comparison with what he appears to be in his published works. Personal character and influence act within very narrow limits both of place and time; while books, if they have a real life and power in them, move in the large circle of the world, and successive generations of men may own their sovereignty. But on the other hand it is not to be denied that in many cases the personal life and character of an author will have much to do with the credit and influence of his works. A good book which is the outcome of a noble life, and is known to be so, has for that very reason a power beyond its own.

In the case of Hume, whatever may be the importance of some of his

writings,—and it is beyond controversy great—it is impossible to assert that they were the outcome of a *noble* life. The impression left on the mind by his biography is hardly less than painful; so conspicuous by their absence are the higher qualities which command admiration and reverence. There is no lofty, inspiring aim, no splendid renunciation and effacement of self, no glow of warm sympathy with the large interests, the joys and woes and aspirations of his race. The great poets of the world are dumb to him; he is blind to the glories of art; he has no music in his soul. Equally insensible to the charm of landscape beauty, he goes up the Rhine and down the Danube, and all the magnificence of scenery is nothing to him. The devotion of saints, the heroism of prophets and martyrs are facts beyond his range. Even the one passage of his early life in which something like enthusiasm appears, in the passion for literature, was brief; for the passion soon became a determination to “push his fortune” by means of literature. And by this determination he stood. “What shall I do to be for ever known?” He deliberately blamed all enthusiasms. There is no evidence that he was ever in love. In the place of these things we find unblemished respectability, charming good nature and sociability, keen worldly prudence, frugality, and pecuniary independence. Large vanity was in him, hunger for praise and for success, irritation at literary disappointments, delight when he breathed the incense of adulation.

Hume’s great distinction as a philosopher is this,—that by his acute investigation of the nature of man, from the point of view of Locke’s system, he gave to philosophical scepticism a strength and logical consistency which it never had before. Locke had taught that all our knowledge was derived from experience; Berkeley had followed and proved that we have no experience except of “ideas;” and that therefore matter is a figment; and Hume went further still, having, as some one has said, courage to follow truth to the very bottom of her well, and showed that mind is a figment too. Both Locke and Berkeley foresaw this possible issue, but shrank back from the abyss. “Hume,” says G. H. Lewes, “deserves the gratitude of mankind for having brought philosophy to this pass. Mankind, however, has paid him with execration.” Perhaps the most memorable result of Hume’s remorseless scepticism was that it awakened Kant to a sense of the necessity of fresh investigation, more searching and more profound, and thus became the occasion of the birth of the Critical Philosophy.

Hume was born at Edinburgh, on the 26th of April, 1711. His father’s house and estate, Ninewells, were in Berwickshire. The family was a branch of that of Lord Home or Hume, who figured in the French wars of the fifteenth century. David was the youngest of three children, and these were brought up carefully by the mother, the father having died in David’s infancy. David, who inherited from his mother his intellectual

acuteness, was sent at an early age to study at Edinburgh, and was destined for the profession of the law. But the taste for literature and philosophy was too strong in him to admit of contenting himself with any other pursuit. He therefore remained at home studying closely. After a few years he made trial of business in a merchant's office at Bristol, but soon gave it up. He next spent three years in France, chiefly at La Flèche, and here he composed his first work, the "Treatise of Human Nature," the materials for which he had been long storing up. In later life he gravely regretted that he had undertaken so vast a task at so early an age, and had in some passages spoken too dogmatically. It was published in 1739 and 1740. It was less successful in the publisher's sense than Hume expected, and in his old age he spoke of its failure with exaggeration, as a falling "dead-born from the press." Gradually he forsook the path of philosophy and applied himself to themes which appeared to promise better remuneration of the kind he cared for. In 1741 and 1742 appeared two volumes of "Essays," dealing with Morals and Politics; and in these he showed so great a capacity for political speculation, and ran so far ahead of received opinions, that he has been called the father of the liberal and rational policy. In literary style the Essays far surpassed the Treatise, and they met with immediate recognition. In 1745, after a fruitless attempt on the part of his friends to get him a professorship of Ethics at Edinburgh, he accepted for a large salary the post of companion or quasi-keeper to the weak-minded young Marquis of Annandale. He bore the infliction for a year, and then escaped from it.

In 1746 he became secretary to General St. Clair in the expedition intended for Canada, but diverted to France. He also attended St. Clair on his mission to Turin, both as secretary and aide-de-camp. During his absence his "Philosophical Essays concerning the Human Understanding," a popular recast of the Treatise with some important additions, were published. After his return to London in 1749, he heard of his mother's death, which moved him to a greater show of tenderness than any other event of his life. During the next two years he wrote, at Ninewells, his "Inquiry concerning the Principles of Morals," his "Political Discourses" (the second series of "Essays"), and his "Dialogues on Natural Religion." The last was not published till after his death; but the "Inquiry" and the "Discourses" appeared at once, the latter winning a great success. In these Discourses the principles of political economy were expounded a quarter of a century before the appearance of the "Wealth of Nations," whose author was one of Hume's intimate friends. About this time Hume settled at Edinburgh, his sister keeping house for him. In 1752 he was elected librarian to the Faculty of Advocates, a post which gave him access to a large library, and thus encouraged him in his next undertaking, a "History of England." The

first volume, containing the reigns of the first two Stuarts, appeared in 1754, and excited the wrath of all parties alike. The second volume (1756) was well received, but the next two (1759), treating of the House of Tudor, gave general offence as the first had done. In 1757 Hume published the "Natural History of Religion," which was violently assailed in a pamphlet supposed to be written by Dr. Hurd, but pretty certainly the work of Warburton. A veil of mystery was purposely thrown over its authorship. The "History of England" was completed by the publication of the earlier portions in 1761. By this work Hume took rank as the first eminent historian in Great Britain; the first endowed with the habits of a philosophical inquirer and master of a fine literary style. Of style he was far more careful than of accuracy. The time spent in the production of the History was too short to allow of nearly adequate original research. Moreover, a strong partisan spirit inspired the narrative, and in process of revision this fault was designedly exaggerated, so that, as has been said, all the lights of the book are Tory and all the shades Whig. This may well surprise the readers of Hume's political writings, in which his doctrines are liberal, almost democratic. The History long held its ground as the chief authority on the subject.

In 1763 Hume accompanied Lord Hertford on his embassy to France, and became secretary to the embassy, with a salary of 1000*l.* a year. At Paris, where his reputation as philosopher stood very high, he was petted and lionized by "society," as Voltaire was to be some years later. After Lord Hertford's departure, Hume remained as *chargé d'affaires*, returning to England in 1767. At this time occurred the episode of his friendly intervention on behalf of Rousseau, resulting in a quarrel, in consequence of the insane hallucinations of the latter and his charges of treachery against Hume. From 1766 to 1769 Hume held the office of Under-Secretary of State, and then finally retired to Edinburgh, where he built a house and proposed to reside for the rest of his life. Hume's success was the beginning of the brilliant period of literary culture and society at Edinburgh, and his house became the centre of attraction. In 1775 began the illness which was to prove fatal. Distinctly aware of this, he wrote "My Own Life," a simple, cheery, self-laudatory record. He died at Edinburgh on the 25th of August, 1776, and his remains were interred in an old burial-ground on the Calton Hill.

Hume's genius for philosophical inquiry has been pronounced of the highest order, bold, penetrating, and original. Thorough-going as his scepticism was, in theology as well as in philosophy, his writings contain much of a positive and dogmatical kind. Observation of facts is the basis of all his teachings; and he anticipated some of the advanced speculations of the present day. His influence has told upon many of the writers who have since influenced the world, and it is far from being exhausted. One great merit he has as a writer, distinct from the higher

qualifications,—that he always treats his subject with gravity and decorum, never employing ribaldry, seldom even wit in support of his views. Among his closest friends were men of known piety and some of the religious leaders of the day. But Johnson, with characteristic bluntness, refused to meet the man whose scepticism extended to the total rejection of the Christian religion, the denial of miracles, of divine Providence, and of the immortality of the soul.

A new edition of Hume's philosophical works, by Professors Green and Grose, with Introductions and Notes, appeared a few years ago. A brief but clear account of his life and his philosophy, by Professor Huxley, forms one volume of the series of "English Men of Letters" (1879).

CHRONOLOGY.

A.D.	Age	A.D.	Age
1711 Born at Edinburgh.		vocates; "Political Dis-	
1734-37 Visited France . . .	23-26	courses"	41
1737 Went to London	26	1754-61 "History of England"	43-50
1738 "Treatise on Human Nature" .	27	1757 "Natural History of Religion"	46
1742 52 "Essays"	31-41	1763 Secretary of embassy to Paris	52
1747 Visited Vienna and Turin . .	36	1766 Returned to Edinburgh	55
1751 "Inquiry concerning the Principles of Morals"	40	1767 Under-Secretary of State	56
1752 Librarian to Faculty of Ad-		1776 Died in Edinburgh	65



KANT.

A.D. 1724-1804.

INTUITION.

EMMANUEL KANT, the celebrated philosopher, founder of the modern German school, was born in Koenigsberg, in 1724. His father was of Scotch descent, extremely poor and exceedingly honest ; his mother was exceedingly pious, and with his early instruction, which was entirely religious, Kant acquired that reverence and love of sincerity which influenced his character and writings in later life. He was educated at the expense of his uncle, pursuing the study of mathematics with great delight, while history and poetry remained comparatively neglected. The most brilliant oratory was considered by him to be merely "delirious prose," and he devoted all his energies to the study of the sciences, developing in himself a kind of dry imagination, a "spirit of abstraction" which characterizes all his works.

After receiving the M.A. degree at Koenigsberg, and passing some time as a private tutor, at the age of thirty-one he was attached to the University as a private teacher. In 1770 he obtained the chair of Mathematics, but soon exchanged it for that of Metaphysics, which he occupied till 1793, eleven years before his death. During all his professorship he lived the most simple and exact life possible, evolving side by side with his philosophical notions the most extraordinary ideas as to daily living.

His household consisted of an old man-servant and a cook. Summer and winter he arose at five minutes before five, and at five o'clock precisely was seated at his breakfast-table, where he drank two cups of tea, and smoked a pipe, while laying out his day's work. At seven he went to give his lecture at the college; returned and worked until a quarter before one o'clock, which was his dinner hour. He always took a glass of wine before dinner, "to open the appetite," and always had an invited guest; but if by chance he saw himself likely to dine alone, the servant was obliged to go into the street, and ask in some passer-by. During the meal he talked on all subjects, philosophy excepted, and tenaciously held to his pet theories on electricity, &c.

After the dinner, always long, came the daily promenade, when at half-past three, as regularly as the church clock struck, he emerged from his house and entered the small street, which has since been called the "Philosopher's Alley," there to walk back and forth eight times, respectfully saluted by the old burghers, and in threatening weather anxiously followed by the faithful servant with an umbrella under his arm. Kant used to give his reasons for this promenade; that he might meditate, and that he might breathe the air through the nose only, holding the mouth closed so that the air might be softened before reaching the lungs, a rule of hygiene which he held to be invaluable in preventing colds and coughs.

On re-entering the house, he read the scientific and political journals till six o'clock, when he commenced work. In order that his thinking should be agreeable and without distraction, he always occupied a certain place, before the window overlooking the Castle at Koenigsberg, and the heat must always be just 14 centigrades, summer and winter. He imagined himself sick if it varied ever so little. He was always much occupied with his health, wore silk stockings attached by cords to his hips, deeming that garters impaired the circulation of the blood, detested beer, in short all the arrangements of his person and living were as complicated as his metaphysical treatises. He went to bed at ten o'clock, terminating the evening with reading, and methodically putting away all ideas likely to prevent or trouble his slumbers. He always slept in a perfectly dark and cold chamber, where the windows were kept closed on principle, summer and winter, in spite of all theories in favour of

change of air. He knew neither passion, suffering, or unhappiness, except by name ; he was simply a thinker and an observer in the world, devoted entirely to study. He died in his eightieth year at Koenigsberg, where he had spent his entire life, leaving a moderate fortune and a library of 450 volumes.

At the head of Kant's masterpiece, the "Critique of Pure Reason," stands like a dedication the name of Bacon, to whose chief work, the "Novum Organum," it forms an antithesis. "That all our knowledge begins with experience there can be no doubt," says the opening paragraph, "but though all begins with experience, it by no means follows that all arises out of experience." "There exists a knowledge independent of sensuous impressions, a knowledge *& priori*." "Philosophy," he declares, "stands in need of a science which shall determine the possibility, principles, and extent of human knowledge *& priori*."

Such a knowledge is given to us by *intuition* ; on this he founds his metaphysics, the transcendental philosophy.

Space is not a conception derived from outward experience. Space is a necessary representation *& priori*. Space is the subjective condition of the sensibility and the necessary foundation of external perception. Time is not a conception derived from outward experience. Time is the formal condition *& priori* of all phenomena whatever ; space is the condition of external phenomena alone. Time and space have no empirical reality, but an absolute and transcendental reality. These two elements are all that are pure intuition ; all other conceptions appertain more or less to sensibility : motion, for example, unites both these elements and presupposes something movable, a perception besides.

From the two intuitions, the primary elements, we come to consider the four conceptions of the understanding, the secondary elements. Two of these are mathematical, quantity and quality ; the other two are dynamical, for instance, cause and effect, necessity.

By deductions from these transcendental categories is obtained a system of transcendental ideas ; the idea of a transcendental doctrine of the soul (*psychologie rationalis*), a transcendental science of the world (*cosmologie rationalis*), and a transcendental doctrine of God (*theologia transcendentalis*).

The soul is substance, a simple unity ; its qualities are immateriality, incorruptibility, personality, spirituality, animality, and immortality. *The world* suggests to us ideas of a beginning, limits, parts, and also liberty (spontaneity), and also necessity. By world we mean the mathematical whole, by nature the dynamical whole. The world has a beginning in time and is limited in space ; it is made up of simple parts, a causality of freedom is necessary ; there exists a necessary being as its cause.

Of God, termed the Ideal, Plato's idea of the divine mind, two ideas

are given ; the *deist* cognizes the existence of a supreme being by pure reason alone, the *theist* discerns him by analogy with nature ; to one he is the cause of the world, to the other he is its author (Ontotheology, Cosmotheology). All cognition begins with intuitions, proceeds from them to conceptions, and ends with ideas.

Reason asks the questions what can I know, what ought I to do, and what may I hope ? The legislation of human reason has two objects, Nature and Freedom ; the philosophy of nature relates to that which is ; that of morals to that which ought to be : thus we have two principal sciences of reason, Mathematics and Ethics.

In a later work, Kant proceeds to build up a system of morality. "He first proves that the concept of duty has an objective character, which is not possessed by any of the concepts of speculative reason. He then maintains that this concept of duty communicates immediately its objectivity to a second concept, that of liberty, which is so closely bound up with the first that they form together an inseparable whole. Duty and liberty become the pivots of man's conscious being ; and his life is one of conflict between the impulse of free will to assert its liberty, and the impulse of conscience to insist on duty, as a curb. This conflict must cease ; there must be some moral equilibrium between duty and liberty. Therefore there is a future life and a God."

There is nothing really good in this world but a good will. A good will is the absolute scope and end of man. A good will is not estimated by its good effects, but must be good in itself. Temperance, fortitude, &c., aid and strengthen good will, but have no inward worth of their own. Good will has an inward, absolute and necessary principle, this is the moral sense, product of pure reason.

Laws are either hypothetic or categoric : a hypothetic law is one which indicates a means to an end, but a *categoric imperative* is a law which is absolute. Moral laws are of this kind. *Let the maxim on which you act be fit for a law to all mankind.* This is Kant's famous rule of life.

CHRONOLOGY.

A.D.	Age	A.D.	Age
1724 Born at Königsberg.		1786 "Metaphysische Anfangsgründe der Naturwissenschaft"	62
1740 Entered university	16	1788 "Critique of Practical Reason"	64
1755 Received degree of M.A. . .	31	1790 "Kritik der Urtheilskraft"	66
1755 "Natural History and Theory of the Heavens"	31	1793 "Die Religion innerhalb der Gräuzen der blossen Vernunft"	69
1770-94 Prof. Logic and Metaphysics; "De Mundi Sensibilis atque Intelligibilis Forma et Principiis"	46-70	1798 "Anthropologie in pragmatischer Hinsicht"	74
1781 "Critique of Pure Reason" .	57	1804 Died at Königsberg	80
1783 "Prolegomena zu einer jeden künftigen Metaphysik" . . .	59		
1785 "Grundlegung der Metaphysik der Sitten"	61		

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